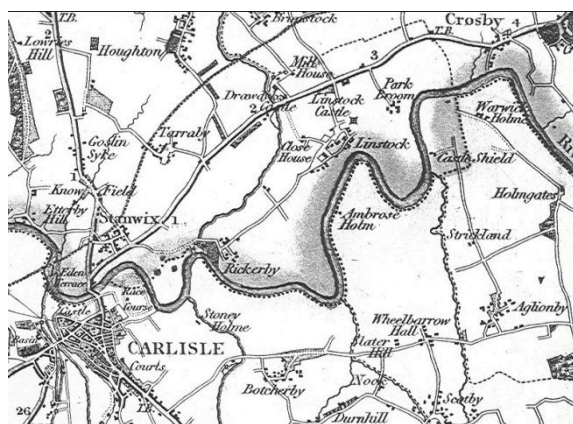


# LINSTOCK FTS, CARLISLE, CUMBRIA



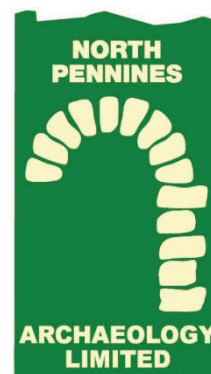
## RAPID DESK-BASED ASSESSMENT

CP. No: 1286/10

10/11/2010

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## *Quality Assurance*

This report covers works as outlined in the brief for the above-named project as issued by the relevant authority, and as outlined in the agreed programme of works. Any deviation to the programme of works has been agreed by all parties. The works have been carried out according to the guidelines set out in the Institute for Archaeologists (IfA) Standards, Policy Statements and Codes of Conduct. The report has been prepared in keeping with the guidance set out by North Pennines Archaeology Ltd on the preparation of reports.

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## SUMMARY

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North Pennines Archaeology Ltd were commissioned by United Utilities to undertake a rapid desk-based assessment prior to an archaeological watching brief during groundworks associated with the installation of a new pumping station and associated sewer pipes between the villages of Linstock and Low Crosby, to the east of Carlisle, Cumbria (NGR NY 415578 to 444592). This scheme of archaeological work follows consultation between United Utilities and Mike Collins of English Heritage (Hadrian's Wall Archaeologist) and Jeremy Parsons of Cumbria County Council Historic Environment Service. This work is required as the pipeline route lies to the south of the Vallum and associated Hadrian's Wall World Heritage Site and in the archaeologically rich Eden valley.

The rapid desk-based assessment involved the examination of all pertinent documents and cartographic sources held in the local studies section at Carlisle Library, and the consultation of the Historic Environment Record (HER) for Cumbria based in Kendal. The HER includes the locations and settings of Scheduled Ancient Monuments, Listed Buildings, Parks and Gardens and other, non-designated archaeological remains. In addition, a number of published sources were consulted to provide background information, including the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society.

The research has shown that there are several sites of archaeological interest along the line of the proposed sewer pipeline. At the western end, the location of the former Drawdykes Mill is situated in close proximity to the western terminus of the route, and close to find spots of several artefacts believed to be Roman in date. North of Linstock, the pipeline route potentially may reveal evidence for a tile kiln, as suggested by a field name, and for an 'ancient road' which is marked on the First Edition Ordnance Survey mapping of 1868. To the west of Low Crosby, the pipeline route passes through an area where earthworks have been observed and surveyed, although the function and date of these features is unknown.

Previous archaeological work has indicated that the presence of archaeological remains dating to the prehistoric, Romano-British or medieval periods is high due to schemes undertaken at Low Crosby, Linstock and to the east of the study area at High Crosby. These sites revealed evidence for occupation of unknown date, and the possibility that similar features such as ditches, pits, gullies and cobbled surfaces may be revealed during the groundworks for the pipeline route needs to be considered.

Historical mapping has shown that the proposed pipeline route potentially may reveal evidence for an 'Ancient Road' and a building, or row of buildings, marked on the First Edition Ordnance Survey map of 1868, formerly located to the north of Park Broom. The site of the former building to the north of Park Broom may also be affected by the construction of the pumping station.

The Hadrian's Wall National Mapping Programme has indicated that several of the fields through which the proposed pipeline will pass have been noted from aerial photographs to contain narrow post medieval ridge and furrow. Of particular interest is a curvilinear feature located at the western terminus of the pipeline route which has been interpreted as a possible Iron Age or Roman boundary ditch; evidence for this feature may be exposed during groundworks.

## ACKNOWLEDGEMENTS

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North Pennines Archaeology Ltd would like to thank Richard Sykes, on behalf of United Utilities, for commissioning the project. NPA Ltd would also like to thank Jo Mackintosh, Historic Environment Records Officer, and Jeremy Parsons, Historic Environment Officer, Cumbria County Council, for all their assistance throughout the project. Further thanks are extended to Stephen White, Carlisle Library, for his help during this project.

The rapid desk-based assessment was undertaken by Fiona Wooler. The report was written by and the drawings were produced by Fiona Wooler. The project was managed by Frank Giecco, Technical Director for NPA Ltd. The report was edited by Martin Railton, Project Manager for NPA Ltd.

## 1 INTRODUCTION

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- 1.1 North Pennines Archaeology were commissioned by United Utilities to undertake a rapid desk-based assessment of the site of a proposed new pumping station and associated sewer pipeline between the villages of Linstock and Low Crosby, Carlisle, Cumbria (NGR NY 415578 to 444592; Figure 1). The proposed works lie within close proximity to the line of the Vallum and associated Hadrian's Wall World Heritage Site. As a result, Jeremy Parsons of Cumbria County Council Historic Environment Service requested that a rapid desk-based assessment be undertaken prior to the commencement of groundworks, which will be subject to an archaeological watching brief.
- 1.2 The rapid desk-based assessment involved the consultation of a number of existing datasets, in order to achieve a full understanding of the nature of the existing resource regarding the geographical, topographical, archaeological and historical context of the pipeline route.
- 1.3 This report outlines the results of the desk-based research. The results of the archaeological watching brief which will be maintained during groundworks will be the subject of a separate report.

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## 2 METHODOLOGY

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### 2.1 PROJECT DESIGN

- 2.1.1 A project design was submitted by North Pennines Archaeology Ltd in response to a request by United Utilities for rapid desk-based assessment of the study area (Giecco 2010). Following acceptance of the project design by Cumbria County Council Historic Environment Service, North Pennines Archaeology Ltd was commissioned by the client to undertake the work. The project design was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute for Archaeologists (IfA), and generally accepted best practice.

### 2.2 RAPID DESK BASED ASSESSMENT

- 2.2.1 The rapid desk-based assessment involved the consultation of the County Historic Environment Record in Kendal in the first instance. This included the collection of all available information held within the HER database, in order to achieve a full understanding of the nature of the existing resource regarding the geographical, topographical, archaeological and historical context of the pipeline route.
- 2.2.2 The local studies section of Carlisle Library was consulted in order to obtain copies of historical maps and documents relevant to the study area. As well as early editions of the Ordnance Survey mapping, 18<sup>th</sup> and 19<sup>th</sup> century cartographic sources were also consulted for information on the historical character of the landscape, as well as the location of buildings or feature which are no longer extant. Several secondary sources and journals, such as the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society, were also consulted.
- 2.2.3 The rapid desk-based assessment was undertaken in accordance with the Institute for Archaeologists *Standard and Guidance for Archaeological Desk-Based Assessments* (IfA 2008).
- 2.2.4 North Pennines Archaeology, and Cumbria County Council, support the Online Access to the Index of Archaeological InvestigationS (OASIS) project. This project aims to provide an on-line index and access to the extensive and expanding body of grey literature, created as a result of developer-funded archaeological work. As a result, details of the results of this project will be made available by North Pennines Archaeology, as a part of this national project.

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### 3 SITE LOCATION AND GEOLOGY

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- 3.1 The villages of Low Crosby and Linstock are located approximately 4 and 6 kilometres respectively to the north-east of the city of Carlisle, on the north side of the River Eden and to the east of the M6 motorway (Figure 1).
- 3.2 The line of the proposed pipeline route commences to the east of the city of Carlisle, close to Whiteclosegate, and heads in a north-easterly direction across the line of the M6 motorway, to the north side of Linstock and Park Broom, and crosses fields to the south of Eden Grove, and terminates at the south end of Low Crosby (Figure 2).
- 3.3 The Countryside Commission places this part of Cumbria in a character area referred to as the 'Solway Basin', an area which stretches from the Scottish border to the north, Brampton to the east and as far west as Allonby and Maryport. This area is characterised as a broad, lowland plain landscape fringed by the low, rugged, relatively remote coastline of the Solway Firth and Irish Sea. The soft horizontal form of this intensively managed, predominantly pastoral landscape contrasts markedly with the Cumbria High Fells. The field pattern is rectilinear and fields are fairly large in scale, bounded by hedges or fences with some hedgerow trees (Countryside Commission 1998, 19).
- 3.4 The Solway Basin is underlain mainly by mudstones and sandstones of Permo-Triassic age ('New Red Sandstone'). Erosion of the comparatively weak Permo-Triassic and Jurassic rocks reduced much of the Solway Basin to an area of low relief prior to the onset of the last glaciations. During this period thick ice-sheets crossed the area from Scotland and the Lake District. These carried with them vast quantities of rock debris which was deposited as boulder clay (till), both beneath the ice and from within it as it melted. The surface of the boulder clay is locally moulded into drumlins (*ibid*, 20).

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## 4 RAPID DESK-BASED ASSESMENT RESULTS

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### 4.1 INTRODUCTION

4.1.1 This historical background is compiled mostly from the county Historic Environment Record (HER), a database of known historical and archaeological sites in Cumbria (excluding the Lake District National Park) and historical mapping, and is intended only as a brief summary of historical developments specific to the study area. A 1km buffer zone along the pipeline route was chosen as the extent of the study area, in order to characterise known and potential historical and archaeological features along its length. A full list of the HER entries located with the 1km buffer zone is provided in Appendix 1 and the locations are shown on Figure 3 as site numbers.

### 4.2 HISTORICAL BACKGROUND

4.2.1 *Prehistoric (pre. AD71/72):* the HER records two sites within a 1km buffer zone of the proposed pipeline route which may potentially date to the prehistoric period:

- *HER No. 41950, The Nurseries, Linstock:* an archaeological excavation conducted prior to residential development in the centre of the village revealed evidence of a series of ditches, shallow pits and clay and cobble foundations, which although could not be dated due to lack of artefactual material, have been suggested to date the later prehistoric, Roman or medieval periods. Further excavations revealed evidence of two north to south aligned parallel ditches which resembled a track or drove way, tentatively interpreted as being Iron Age or Roman in date (Site No. 17).
- *HER No. 43164, Low Crosby Building:* an archaeological evaluation undertaken in 1994 in advance of residential development revealed evidence of a roughly D-shaped building with a double-timber wall and defined by a pair of concentric gullies. The lack of artefactual evidence has meant that dating this former structure was not possible, however it has been suggested it may have originated in the prehistoric, Romano-British, medieval or later periods (Site No. 18).

4.2.2 *Roman (c.71/72-410AD):* the HER records nine sites within the 1km buffer zone along the proposed pipeline route which date to the Roman period:

- *HER No. 491, Hadrian's Wall Milecastle 64:* the east face of the west wall of Milecastle 64 was located in 1962, 104m west of Brunstock Beck on the line of Hadrian's Wall as marked on OS survey. Its walls

were found to have been extensively robbed but part of the north wall survived as far as the first course of facing stones. The north gateway, which was 3m wide, had been blocked at some stage. A cobbled road 5m wide ran through the centre of the Milecastle, and outside the west wall was a cobbled area. The remains of Milecastle 64 survive below the turf cover as buried remains (Scheduled Ancient Monument No. 28478) (Site No. 1).

- *HER No. 5782, Hadrian's Wall and Vallum*: the group number for Hadrian's Wall and Vallum (Scheduled Ancient Monument No's 26121 and 28473, and Listed Building No. 78076) (Site No. 6).
- *HER No. 10118, Low Crosby Road*: site of a length of road which has now gone, but has been suggested may have formed part of the Stanegate Roman road (Site No. 7).
- *HER No. 19508, Spindle-Whorl Find, Whiteclosegate*: a spindle-whorl found by metal detector. Has similar decoration of examples of Roman and medieval date, however given its find spot it has been suggested this object dates to the Roman period (Site No. 11).
- *HER No. 19509, Sling-Slot Find, Whiteclosegate*: an acorn shaped sling-shot was found with a metal detector at Whiteclosegate (Site No. 12).
- *HER No. 19517, Coin Find, Whiteclosegate*: an AR denarius of Trajan dated c.112-114 found by metal detector near Drawdykes (Site No. 13).
- *HER No. 19547, Copper-Alloy Strap-Terminal Find, Tarraby*: a corroded cup-shaped object found in the garden of a house on Whiteclosegate c.1990. Findspot suggests the object dates to the Roman period (Site No. 14).
- *HER No. 19658, Horse Harness Ring Find, Tarraby*: two harness rings found during excavations at Tarraby in 1976 (Site No. 15).
- *HER No. 43170, Linstock Road*: a dotted line labelled 'Ancient Road (Site of)' on the First Edition OS map (see Figure 7) (Site No. 24).

4.2.3 Apart from the HER entries referred to above, there are several buildings located within the 1km buffer zone which are noted to incorporate stone from Hadrian's Wall:

- *HER No. 3806, Church of St John, Low Crosby*: The Post Office Directory of Cumberland and Westmorland 1858 suggests that the new church at Low Crosby (built 1854) was partly built with stone from the Roman wall (Listed Building) (Site No. 2).



- *HER No. 3807, Drawdykes Castle*: farmhouse, formerly a tower house of 14<sup>th</sup> century date, converted to house 1676 for John Aglionby. Rear wall has built-in Roman altar (Listed Building) (Site No. 3).
- *HER No. 3809, Linstock Castle*: farmhouse, formerly a tower house, 12<sup>th</sup> or early 13<sup>th</sup> century. Believed to have been constructed from masonry taken from Hadrian's Wall (Listed Building) (Site No. 4).

4.2.4 **Medieval (c.410 to 1540AD)**: The HER records five sites which either have elements which date to the medieval period, or have been suggested may be of this period due to lack of artefactual evidence:

- *HER No. 3806, Church of St John, Low Crosby*: built 1854 by R H Billings, totally replacing an earlier medieval church on the same site. It has been suggested that the church is built on the site of a motte, as there is an oval mound c.2m high and a crescent-shaped mound in the churchyard (Site No. 2).
- *HER No. 3807, Drawdykes Castle*: farmhouse, formerly tower house. Probably 14<sup>th</sup> century in date, converted to house 1676 by WM Thackeray from John Aglionby (Site No. 3).
- *HER No. 3809, Linstock Castle*: farmhouse, formerly a tower house of 12<sup>th</sup> or early 13<sup>th</sup> century date as a palace for the Bishops of Carlisle, with 17<sup>th</sup> to 20<sup>th</sup> century additions (Site No. 4).
- *HER No. 41950, The Nurseries, Linstock*: an archaeological excavation conducted prior to residential development in the centre of the village revealed evidence of a series of ditches, shallow pits and clay and cobble foundations, which although could not be dated due to lack of artefactual material, have been suggested to date the later prehistoric, Roman or medieval periods, as already noted above (Site No. 17).
- *HER No. 43164, Low Crosby Building*: an archaeological evaluation undertaken in 1994 in advance of residential development revealed evidence of a roughly D-shaped building with a double-timber wall and defined by a pair of concentric gullies. The lack of artefactual evidence has meant that dating this former structure was not possible, however it has been suggested it may have originated in the prehistoric, Romano-British, medieval or later periods, as already noted above (Site No. 18).

4.2.5 Writing with reference to the origins of Crosby, McIntire noted that its history was linked with that of Linstock. He noted that *'while King Henry I was occupied in reorganising the government of Carlisle and its neighbourhood he granted Linstock to his chaplain Walter. This Walter "took upon him the religious habit of a regular canon in the priory of the St Mary's, Carlisle" and with the*

consent of the king gave Linstock and Carleton to “that house of religion in pure alms for ever”. For a considerable period the convent and bishop of Carlisle held these lands, but following disputes, the barony of Linstock was granted to the bishop, and for many years Linstock Castle was the only Episcopal palace of the diocese of Carlisle. After the barony of Linstock came to the priory in Carlisle, a grange was erected in connection with the management of newly acquired lands, and the place where it was built was named Crosby as belonging to the church’ (McIntire 1930-1939). From this it would appear that McIntire was suggesting that Crosby, or what is now Low Crosby, originated as a farm connected to the priory in Carlisle.

**4.2.6 Post-medieval (c.1540-present):** the HER records 16 sites of post-medieval date:

- HER No. 3806, *Church of St John, Low Crosby*: built in 1854 totally replacing a medieval example (Site No. 2).
- HER No. 3807, *Drawdykes Castle*: Former tower house of probable 14<sup>th</sup> century date converted into a house 1676 by Wm Thackeray for John Aglionby. The property is believed to have one of the earliest Classical Revival facades in the area (Site No. 3).
- HER No. 3809, *Linstock Castle*: former tower house, now farmhouse, 12<sup>th</sup> or early 13<sup>th</sup> century with 17<sup>th</sup>-20<sup>th</sup> century additions (Site No. 4).
- HER No. 4687, *Crosby on Eden Toll House*: the toll bar at Crosby was on the Carlisle-Temon Turnpike. Demolished in 1977 to improve visibility on the road (Site No. 5).
- HER No. 10631, *Drawdykes Mill*: site of corn mill shown on First Edition OS mapping (Site No. 8).
- HER No. 16957, *Low Crosby Model Farm*: Low Crosby Farm is said to be a courtyard arrangement through an ornamental arch, now converted to residential use. Possibly refers to Eden Steads Farm (Site No. 10).
- HER No. 41504, *Moor House, Rickerby*: farmstead shown on First Edition OS mapping of c.1865. Possible apsidal gin case against western range (Site No. 16).
- HER No. 43165, *Kiln Croft, Low Crosby*: a field named Kiln Croft may suggest that a kiln was located in this area (Site No. 19).
- HER No. 43166, *Park Broom Tithe Barn and Stack Yard*: a plot named ‘Tithe Barn and Stack Yard’ on the Linstock Tithe Map of 1840 (Site No. 20).

- HER No. 43167, *Park Broom Byre and Garden*: a plot named 'Byre and garden' on the Linstock Tithe Map of 1840 (Site No. 21).
- HER No. 43168, *Tithe Barn Close, Park Broom*: two plots named 'Tithe Barn Close' on the Linstock Tithe Map of 1840 (Site No. 22).
- HER No. 43169, *Tile Kiln Field, Linstock*: a field named Tile Kiln Field on the Linstock Tithe Map of 1840 (Site No. 23).
- HER No. 43172, *The Old Cottage/Linstock Cottage*: an unnamed building is shown in this location on the Linstock Tithe Map of 1840. It is named Linstock Cottage on the First and Second Edition OS maps (Site No. 26).
- HER No. 43173, *Eden Grove, Low Crosby*: an early 19<sup>th</sup> century complete Greek Revival Regency villa built for Richard Carruthers (Site No. 27).
- HER No. 43174, *West Lodge, Eden Grove*: one of two lodges to Eden Grove (Site No. 28).
- HER No. 43175, *East Lodge, Eden Grove*: one of two lodges to Eden Grove (Site No. 29).

4.2.7 Writing at the end of the 18<sup>th</sup> century, Hutchinson provided some information on the parish of Crosby, in which historically Low Crosby and Linstock were located. He noted that the soil on the south side of the parish was a fertile, sandy loam, and that at this date was in general '*suited to the production of every grain, root and grass; but wheat and barley seem most attended to*'. He also noted that a great portion of the parish had been common land until around the end of the 17<sup>th</sup> century when it was enclosed. As far as any industrial sites within the parish are concerned, his only reference is to a sandstone quarry at Holm End Farm. In his description of the general appearance of the parish he noted: *The south part of the parish is a most beautiful level and fertile vale, formed by the Eden, with pretty fields and hedgerows of thorn. The other parts higher, and somewhat bleak, but not unpleasant, and have a fine open view to the south. Buildings are mostly of brick, and very good, but some are made with clay walls and thatched. Upon the whole the situation of which parish is pleasant and healthy and its appearance very agreeable*' (Hutchinson 1794-97, 576). The significance of William Hutchinson's comments in relation to the present study is that he appears to have described many of the fields close to the Eden as being very fertile and generally under arable production, indicating that many of the fields would have been ploughed. These plough marks may survive as slight ridge and furrow earthworks, but there is also the possibility that the plough action may have had an impact on below ground archaeological remains.

- 4.2.8 Writing in 1860 with reference to Crosby on Eden parish, William Whellan noted that 'the military road' between Newcastle and Carlisle intersected the parish. This road was formed and completed soon after the Jacobite Rebellion in 1745 for the purpose of '*keeping a free and open communication between the city of Carlisle and the town of Newcastle-upon-Tyne*'. Whellan also noted that there were distinct remains of Roman roads running through the middle of the parish, in an east to west direction, almost alongside the military road (Whellan 1860, 157).

### 4.3 PREVIOUS ARCHAEOLOGICAL WORK

- 4.3.1 The following schemes of archaeological work have been undertaken within a 1km buffer zone of the pipeline route. Information on these schemes of work has been derived from the Historic Environment Record, where copies of the reports referred to are housed. The relevance of previous archaeological work to the present study is that it has the potential to provide information on the character of below ground archaeological remains, which may be encountered during the groundworks associated with the erection of the pumping station at Park Broom, and the excavation of the sewer pipe trench.
- 4.3.2 ***Tarraby B6264: Archaeological Watching Brief, Central Excavation Unit, 1976:*** an archaeological watching brief was undertaken during the excavation of a trench crossing the B6264, slightly to the east of the Near Boot Inn, Whiteclosegate. This was the point where the Vallum crosses from the south to the north side of the road. Observation within the trench showed a grey brown soil which contrasted with the undisturbed red boulder clay at the north end of the trench; this may have indicated the Vallum ditch (HER Report Ref: 1/76/503).
- 4.3.3 ***Low Crosby, Carlisle: Archaeological Evaluation, Carlisle Archaeological Unit, 1994:*** an archaeological evaluation was undertaken in advance of a residential development of a former field to the north side of Low Crosby, east of the Village Hall. Most of the field proved to be devoid of archaeological remains, but features were recorded towards the north-east corner of the field. Limited excavation revealed evidence for several curvilinear gullies cutting the natural subsoil, which appeared to represent the remains of a circular or sub-circular timber structure. Although a complete ground plan could not be obtained, and no artefactual material was recovered, the building was tentatively identified as a round house or pre-Roman or early Roman date.
- 4.3.4 Following on from this evaluation, an archaeological excavation was undertaken by Carlisle Archaeological Unit in 1997. A roughly rectangular

area of approximately 300sqm was mechanically stripped to the surface of the natural subsoil. Three phases of a roughly D-shaped building were revealed, with a double timber wall and defined by a pair of concentric gullies. No surviving floors, occupation deposits or external surfaces were associated with these gullies. The building measured 6.5m north to south by 1.6m east to west externally, and 4.05m by 2.8m internally. A narrow entrance was located on the west side. A slight polygonal appearance to the gullies indicated that the walls were probably of wattle panels constructed on sill beams. The lack of artefacts from the site meant that the date and function of the building remained uncertain, although it may have been prehistoric, Romano-British, medieval or later in date, and the double wall suggested it served as a dwelling rather than an animal pen (No reports at HER, see Zant 1998, 299-303).

- 4.3.5 *The Nurseries, Linstock, Carlisle (Phase 1): An Archaeological Evaluation, Carlisle Archaeological Unit, 1994*: an archaeological evaluation was undertaken (Phase 1) prior to a residential development in the centre of Linstock. Eight trenches were excavated and revealed a series of ditches, perhaps for an enclosure, shallow pits, and clay and cobble foundations for buildings, although the relationship between these features could not be ascertained, and no date could be ascribed except to suggest they may be later prehistoric, Roman or medieval. A small collection of medieval and modern pottery was also collected from the topsoil (HER Report Ref: 1/91/101).
- 4.3.6 *The Nurseries, Linstock, Carlisle: An Archaeological Evaluation (Phases 2 and 3), Carlisle Archaeological Unit, 1995*: following on from the work undertaken in 1994, 13 evaluation trenches were excavated in 1995 in a programme of further investigation at The Nurseries. The continuation of a ditch initially found in 1994 was almost certainly seen, forming three sides of a sub-rectangular enclosure measuring approximately 40m by 30m. Additional areas of cobbling were identified, but these were again difficult to interpret except that they overlay a soil layer containing an iron horse shoe, and so thought to be medieval or later in date. Sections of at least two other ditches, perhaps from a second enclosure, and a number of pits, were also recorded (HER Report Ref: 1/95/124).
- 4.3.7 *An Excavation at the Former Nurseries, Linstock, Carlisle: Carlisle Archaeological Unit, 1997*: an excavation was conducted following the evidence revealed in the evaluations undertaken in 1994 and 1995. Further remains of the undated square enclosure were excavated, together with a number of undated field boundary ditches, and two north to south parallel ditches, resembling a track way or drove road of possible Iron Age or Roman date (HER Report Ref: 1/98/499).



- 4.3.8 ***Stile Farm, Linstock: Archaeological Watching Brief, The Archaeological Practice, 2002:*** a watching brief was maintained during the cutting of foundation trenches for a new-build bungalow at Stile Farm. The watching brief was requested due to the proximity of the site to Linstock Castle. No archaeological remains or artefactual material was located during the watching brief (HER Report Ref: 1/02/415).
- 4.3.9 ***Archaeological Evaluation Report: Ashgrove, Brampton Old Road, Carlisle: Gerry Martin Associates, 2007:*** four evaluation trenches were excavated prior to an extension to the existing house. The evaluation identified that deposits at a depth of 0.65m possibly represented fills within Hadrian's Wall Vallum. The sides of the Vallum were not encountered and no artefacts were retrieved (HER Report Ref: 1/07/1756).
- 4.3.10 ***Archaeological Evaluation on land at the Old Clydesdale Stud, Tarraby, Carlisle, NPA Ltd, 2008:*** six evaluation trenches were excavated down to the natural geology in advance of new service trenches within the Scheduled area of Hadrian's Wall (SAM No. 28482). No features were found, and there were no finds predating the post-medieval period (HER Report Ref: 1/08/2242).
- 4.3.11 ***24 Houghton Road, Carlisle: Report on an Archaeological Watching Brief, Jan Walker, 2008:*** a watching brief was maintained during groundworks to a maximum depth of 0.80m for an extension to the existing property. The site is located between Hadrian's Wall and the Vallum. No archaeological features or significant finds were noted (HER Report Ref: 1/08/1952).
- 4.3.12 ***Crosby on Eden Waste Water Treatment Works Pipeline: Rapid Desk-Based Assessment and Walkover Survey, Oxford Archaeology North, 2008:*** a rapid desk-based assessment and walkover survey was undertaken in advance of proposals by United Utilities for the construction of a waste water pipeline from the north of Linstock to Low Crosby [this work covered the eastern section of the present study]. A total of 19 sites of archaeological interest were identified within the study area of which 12 had previously been recorded in the Cumbria HER and National Monuments Record (NMR). The work concluded that there was some potential for archaeological remains along the proposed route of the pipeline. The proximity of Hadrian's Wall to the west end was noted to heighten the potential for previously unidentified Roman period remains to be disturbed during the groundworks. In addition, the Stanegate Roman road ran to the south of Hadrian's Wall across the study area, and a stretch of which has been identified at High Crosby. Within the study area there are two putative stretches of the road (HER Report Ref: 1/08/1927).

- 4.3.13 ***Crosby on Eden Waste Water Treatment Works Pipeline, Supplementary Report: Topographic Survey, Oxford Archaeology North, 2009:*** a topographic survey of linear earthworks identified in a previous desk-based assessment was undertaken prior to the construction of a new utilities pipeline from Linstock to Low Crosby. The earthworks measured 10m and 60m in length. No definitive pattern or function could be ascertained, though some may have been field boundaries, others were perhaps related to flood defences from the adjacent Willow Beck (HER Report Ref: 1/09/2133).
- 4.3.14 ***Low Crosby Flood Alleviation Scheme: Geophysical Survey, Archaeological Services WYAS, 2009:*** four areas around the village of Low Crosby were surveyed using a magnetic gradiometer to inform a flood defence alleviation scheme. Several anomalies were interpreted as geological and agricultural in nature, together with two large possible building platforms to the east of the church [no reference in made to the Stanegate Roman road which is thought to have passed through the village] (HER Report Ref: 1/09/2039).
- 4.3.15 ***Low Crosby, Cumbria: Archaeological Watching Brief, Oxford Archaeology North, 2009:*** a watching brief was maintained during the excavation of nine test pits at various points around the village to inform a flood defence alleviation scheme. The pits measured 0.30m square and 1.2m deep. No evidence of the Stanegate Roman road was found, which is thought to have passed through the village, or any other archaeological features or finds (HER Report Ref: 1/09/2040).
- 4.3.16 Although located just outside the study area defined as a 1km buffer zone along the route of the pipeline, archaeological work undertaken by Carlisle Archaeological Unit at Crosby on Eden will be referred to here. An archaeological excavation was conducted in advance of road construction at High Crosby in 1993. This work revealed a palimpsest of features, provisionally dated by reference to artefacts and radiocarbon determinations to the Neolithic and Bronze Age. In 1994 a subsequent evaluation provided stratigraphic and artefactual material suggestive of at least two occupational phases. Structural elements included ditches and gullies as well as slots, post holes and pits. Two trenches yielded shallow curving gullies or slots which raised the possibility that one or both may have represented round houses. It was not possible to define the nature of the occupation of either phase, however. Although no features diagnostically funerary, military or ritual were discovered, they could not be ruled out. The simplest hypothesis was the suggestion was of a domestic/agricultural context with structural elements including ditches, walls and/or fences, as shown by the presence of a slot and post holes, and shallow pits. The dating of the phases is problematic; a prehistoric element seemed likely for the earliest phase.

Lithics and fire-cracked stones were a feature of the 1993 evaluation on the line of the Crosby by-pass where settlement attributed to the Neolithic/Bronze Age was discovered. The later phase may have been Roman in date on the evidence of the pottery (HER Report Ref: 1/97/1139).

#### 4.4 HISTORICAL MAPPING

4.4.1 Due to the present closure of Carlisle Record Office, prior to its relocation to Petteril Bank House, the range of cartographic sources usually consulted for a rapid desk-based assessment was limited to the availability of historical maps housed at Carlisle Library local studies. The following maps were consulted for information on the historical landscape and features along the line of the proposed pipeline:

4.4.2 *John Speed's Map of Cumberland 1610 (Figure 4)*: although at a small scale, this extract of John Speed's map does show that there was a notable property at Linstock in the early 17<sup>th</sup> century, presumably a representation of Linstock Castle, and there was a church at 'Crosby' (now Low Crosby), indicating there was a settlement of some form there at this date.

4.4.3 *Hodskinson and Donald's Map of Cumberland 1774 (Figure 5)*: this map is also at a small scale, however it is possible to note that at Crosby, now Low Crosby, there was a church and small settlement, seemingly lining the road which leads towards the River Eden. To the west of 'Crosby' is another small settlement annotated as 'Park Broom', with a small vignette representing Linstock Castle to its western side. To the west of Linstock Castle is a site labelled 'Close House', a property which is still extant located to the north-west side of the modern village of Linstock. To the extreme western end of the study area is 'Draw Dikes', the modern Drawdykes Castle, and White Close Yate, the modern Whiteclosegate, located at the eastern end of Brampton Road. On the opposite side of the road is the symbol for a watermill located at 'Mill House', which on later mapping is shown to have utilised a mill race off the Brunstock Beck. The line of Hadrian's Wall, which is labelled on this map as the 'Picts Wall' is clearly visible to the north side of the road which leads from Carlisle in the west to Brampton in the east. A building labelled 'Toll Gate' is shown between Crosby and Park Broom, on the south side of the road, this building, or a building on the site, was demolished in 1977 (HER No. 4687).

4.4.4 *Greenwood's Map of Cumberland 1823 (Figure 6)*: Greenwood's map appears to suggest that the settlements of 'Crosby' and Linstock have become much more developed by this date, as well as there seemingly being several properties at Park Broom.



- 4.4.5 ***First Edition Ordnance Survey Map 1865, 6" to 1 mile scale (Figure 7):*** this was the earliest map consulted which provided clear information on the settlements of Low Crosby, Park Broom and Linstock, as well as the form of the fields, and features of historical interest, for example the line of an 'Ancient Road' which is shown aligned east to west to the north side of Linstock and Park Broom, with a further section shown to the west side of Low Crosby and leading away from the village to the east, close to the church. The proposed pipeline route is aligned close to some of these sections, in particular to the north of Linstock, therefore it is possible this former road may be encountered, although the exact alignment of this 'ancient road' has yet to be determined. By the publication of this map, the water mill at Mill House, annotated on this map as 'Millbrook Cottage' is no longer shown, although the mill race is still visible, however located to the south of Drawdykes Castle is a corn mill labelled 'Drawdykes Mill. This mill is not shown on modern mapping, and the proposed line of the pipeline is shown to be located close to the site of this former mill. At the western end of the pipeline route, there are a small group of properties shown at Whiteclosegate, with 'The Boot' public house clearly labelled (now known as The Near Boot, and still operating as a public house). The projected lines of the 'Roman Wall' and the Vallum are also shown.
- 4.4.6 ***Second Edition Ordnance Survey Map 1901, 6" to 1 mile scale (Figure 8):*** this map shows that the proposed pipeline route appears to be located mainly through fields. To the north side of Park Broom, however, there appears to be a property, or row of properties, which are shown on this map but are no longer extant, located close to the line of the proposed pipeline route. Drawdykes Mill is still annotated on this map. At Tarraby the location of 'inscribed altars found 1804' and 'Altar and sword found 1840 & 50' is marked, and to the south side of Whiteclosegate the findspots of 'Urns found AD 1872' and 'Roman remains found AD 1873' [south of Moorhouse Woods] indicates that Roman activity was not just confined to the line of Hadrian's Wall.
- 4.4.7 ***Ordnance Survey Map 1926, 6" to 1 mile scale (Figure 9):*** by the publication of this map in 1926, the site of Drawdykes Mill is no longer annotated indicating that it had gone out of use, and had possibly been demolished, by this date. The majority of the proposed pipeline route appears to be located through, what is shown as fields.
- 4.4.8 ***Ordnance Survey Map 1946, 6" to 1 mile scale (Figure 10):*** although very little appears to have changed on the ground along this line of the proposed pipeline, of particular interest is at the western end of the study area which shows the growth of housing along both sides of Brampton Road leading towards Whiteclosegate. It would appear that during the construction of

some of this housing, cinerary urns and pottery were found in 1936-37, as labelled on this map to the south-east side of Croft Road. On the north side of the line of Hadrian's Wall is a large area shown with regular building, which although not labelled, is the site of Hadrian's Camp.

#### **4.5 HADRIAN'S WALL NATIONAL MAPPING PROGRAMME (HWNMP)**

4.5.1 The HER contains information on features noted from aerial photographs by English Heritage which have been recorded along the length of Hadrian's Wall. Several features are located along the proposed pipeline route, and may be encountered during groundworks (the fields containing these features and coloured orange on Figure 3):

- *Post-medieval narrow ridge and furrow noted in the large field immediately to the west of Low Crosby, noted on aerial photographs dating to 1946 (ID No. 1376337).*
- *Post-Medieval narrow ridge and furrow noted in the fields north of Linstock, noted on aerial photographs dating to 1946 and 1988 (ID No. 1376337).*
- *Post-Medieval narrow ridge and furrow noted in the fields immediately to the south-west of Drawdykes Castle, noted on aerial photographs dating to 1991 (ID No. 1376337).*
- *An Iron Age or Roman boundary ditch was seen as cropmarks on aerial photographs located at the extreme western end of the proposed pipeline route. The ditch is curving and runs towards the Vallum. It may form part of a field system which possibly pre-dates the Vallum. However, the cropmark stops before the line of the Vallum so the relationship between the two features is uncertain (ID No. 1384779).*

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## 5 CONCLUSION

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- 5.1 Information derived from the Historic Environment Record database maintained by Cumbria County Council has shown that there are several sites of archaeological interest along the line of the proposed sewer pipeline. At the western end, the location of the former Drawdykes Mill (HER No. 10631) is situated in close proximity to the western terminus of the route, and close to find spots of several artefacts believed to be Roman in date. North of Linstock, the pipeline route potentially may reveal evidence for a tile kiln, as suggested by a field name (HER No. 43169), and for an 'ancient road' (HER No. 43170) which is marked on the First Edition Ordnance Survey mapping of 1868 (See Figure 7). To the west of Low Crosby, the pipeline route passes through an area where earthworks have been observed and surveyed, although the function and date of these features is unknown (HER No. 43171).
- 5.2 Previous archaeological work has indicated that the possibility for the presence of archaeological remains dating to the prehistoric, Romano-British or medieval periods is high due to schemes undertaken at Low Crosby, Linstock and to the east of the study area at High Crosby. These sites revealed evidence for occupation of unknown date, and the possibility that similar features such as ditches, pits, gullies and cobbled surfaces may be revealed during the groundworks for the pipeline route needs to be considered.
- 5.3 Historical mapping has shown that the proposed pipeline route potentially may reveal evidence for an 'Ancient Road' and a building, or row of buildings, marked on the First Edition Ordnance Survey map of 1868 (Figure 7), formerly located to the north of Park Broom. The site of the former building to the north of Park Broom may also be affected by the construction of the pumping station.
- 5.4 The Hadrian's Wall National Mapping Programme has indicated that several of the fields through which the proposed pipeline will pass have been noted from aerial photographs to contain narrow post medieval ridge and furrow. Of particular interest is a curvilinear feature located at the western terminus of the pipeline route which has been interpreted as a possible Iron Age or Roman boundary ditch; evidence for this feature may be exposed during groundworks.

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## APPENDIX 1: HISTORIC ENVIRONMENT RECORD SITES

Site No.	HER No.	Site Name	Description	NGR	General Period
1	491	Hadrian's Wall Milecastle 64	The east face of west wall of milecastle 64 was located in 1962, west of Brunstock Beck on the line of the Wall are marked on OS Survey	E:341850 N:558800	Roman (Hadrianic)
2	3806	Church of St John, Low Crosby	Built in 1954, totally replacing a medieval church on the same site	E:344800 N:559590	Post Medieval
3	3807	Drawdykes Castle	Farmhouse, formerly tower house. Probably 14 <sup>th</sup> century, converted to house 1676 by Wm Thackaray for John Aglionby	E:341900 N:558550	Medieval Post Medieval
4	3809	Linstock Castle	Farmhouse, formerly tower house. 12 <sup>th</sup> century or early 13 <sup>th</sup> century, with 17 <sup>th</sup> to 20 <sup>th</sup> century additions and alterations	E:342870 N:558490	Medieval Post Medieval
5	4687	Crosby on Eden Toll House	The tollbar at Crosby was on the Carlisle-Tamon Turnpike. Demolished in 1977 to improve visibility on the road (photographs at Tullie House)	E:343850 N:559530	Post Medieval
6	5782	Hadrian's Wall and Vallum	Group number for Hadrian's Wall	E:322100 N:562600	Roman (Hadrianic)
7	10118	Low Crosby Road	Site of a length of road, now gone. Possibly a continuation of the Stanegate Roman road	E:344360 N:559483	Roman
8	10631	Drawdykes Mill	Site of a corn mill shown on the First Edition OS map c.1865	E:341600 N:557920	Post Medieval
9	11045	Mill House place name	The name 'Mill House' suggests a possible site of a mill	E:342000 N:558800	Unknown
10	16957	Low Crosby Model Farm	Low Crosby Farm is said to be a courtyard arrangement through an ornamental arch, now converted to residential use. Some confusion about actual location of this site, suggested it may be Eden Steads Farm	E:344000 N:559500	Post Medieval (Regency)
11	19508	Spindle Whorl find, Whiteclosegate	A spindle whorl found by metal detector	E:341500 N:558000	Possibly Roman or medieval

Site No.	HER No.	Site Name	Description	NGR	General Period
12	19509	Sling Shot find, Whiteclosegate	An acorn-shaped sling shot found by metal detector	E:341500 N:558000	Possibly Roman
13	19517	Coin Find, Hadrian's Wall Milecastle 64, Drawdykes	An AR denarius of Trajan dated c.AD 112-114 was found by metal detector near Drawdykes	E:342150 N:558500	Roman (Trajanic)
14	19547	Copper Alloy Strap Terminal Find, Tarraby	A corroded cup-shaped object found in the garden of a house on Whiteclosegate in c.1990	E:341000 N:558000	Roman
15	19658	Harness Ring Find, Tarraby	During excavations at Tarraby in 1976, two harness rings were found	E:340940 N:558000	Roman
16	41504	Moor House, Rickerby	Farmstead shown on First Edition OS map of c.1865. Possible apsidal gin case against the western range of farm buildings	E:341790 N:557544	Post Medieval (Victorian)
17	41950	The Nurseries, Linstock	Archaeological excavations revealed evidence of a series of ditches, shallow pits and foundations of buildings	E:342700 N:558300	Unknown
18	43164	Low Crosby Building	An archaeological evaluation was undertaken in 1994 in advance of residential development of a former field. Evidence for three phases of a roughly D-shaped building were revealed or possible prehistoric, Romano-British, medieval or later in date	E:344600 N:559600	Unknown
19	43165	Kiln Croft, Low Crosby	A field named 'Kiln Croft' shown on the Crosby Tithe Map of 1957 (field no. 362). The name suggests that a kiln was located in this area	E:344290 N:559507	Unknown
20	43166	Park Broom Tithe Barn and Stack Yard	A plot named 'Tithe barn and stack yard' on the Linstock Tithe Map of 1940. A building is also shown on the Tithe and later mapping, but now appears to have gone	E:343271 N:559003	Post Medieval
21	43167	Park Broom Byre and Garden	A plot named 'Byre and garden' on the Linstock Tithe Map of 1840	E:343315 N:559010	Post Medieval
22	43168	Tithe Barn Close, Park Broom	Two plots named 'Tithe Barn Close' on the Linstock Tithe Map of 1940	E:343325 N:559162	Post Medieval

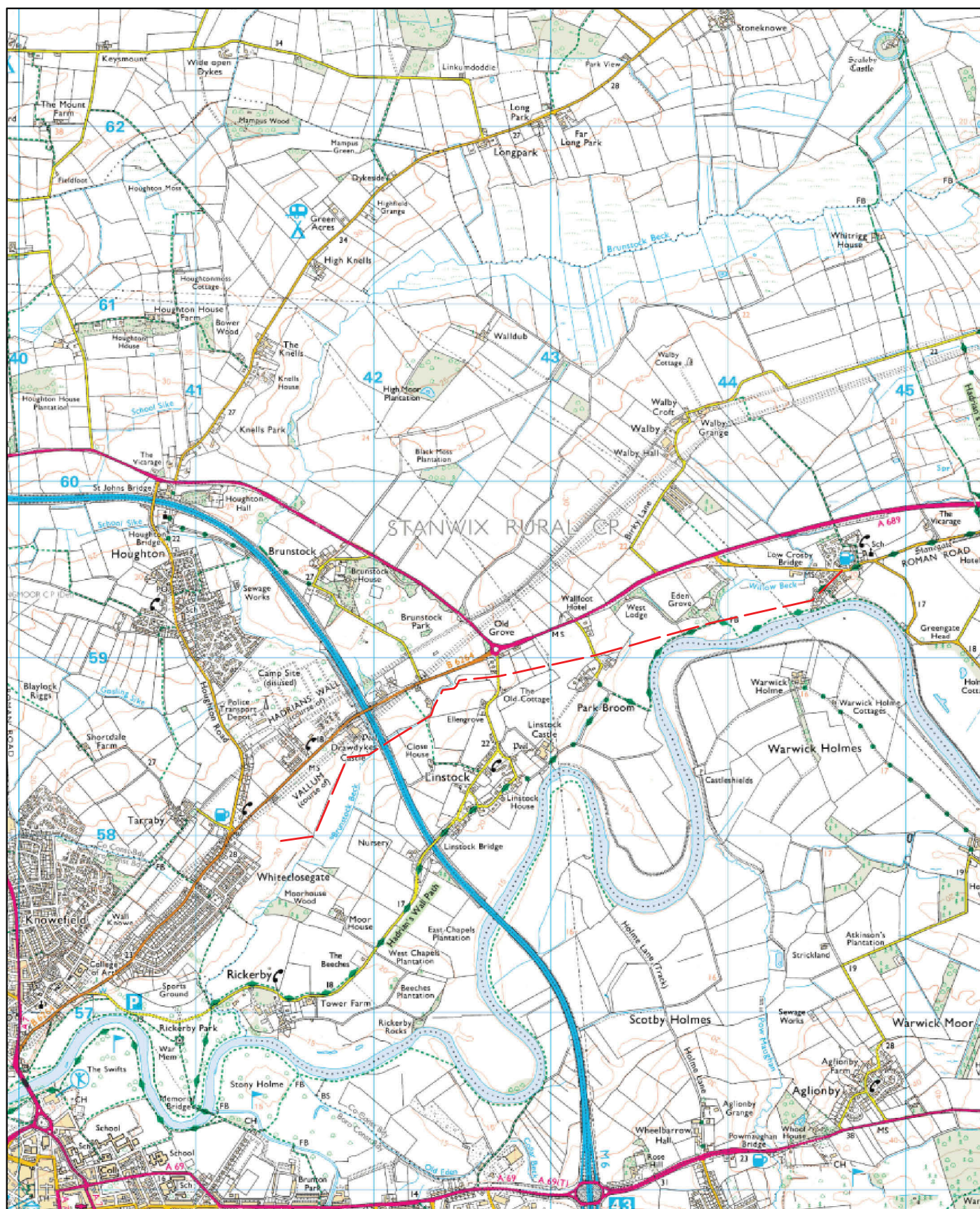
Site No.	HER No.	Site Name	Description	NGR	General Period
23	43169	Tile Kiln Field, Linstock	A field named 'Tile Kiln Field' on the Linstock Tithe Map of 1840, suggesting a tile kiln was located in close proximity	E:342750 N:558950	Post Medieval
24	43170	Linstock Road	A dotted line labelled 'Ancient Road (site of)' on the First Edition OS mapping (6" scale). The putative road extends from north of Linstock Cottage, north of Park Broom, and terminates just west of the east side of the landscaped park at Eden Grove. It may have joined a second stretch of road to the west of Low Crosby, and could be a continuation of the Stanegate Roman road	E:343223 N:559013	?Roman Unknown
25	43171	Low Crosby Earthworks	Series of east to west aligned uneven linear features of unknown date and function. A topographic survey of the earthworks was undertaken in 2008 prior to the construction of a new utilities pipeline	E:344050 N:559340	Unknown
26	43172	The Old Cottage/Linstock Cottage	An unnamed building is shown at this location on the Linstock Tithe Map of 1840. It is named Linstock Cottage on the First and Second Edition OS maps, but modern mapping names it The Old Cottage	E:342725 N:558810	Post Medieval
27	43173	Eden Grove, Low Crosby	An early 19 <sup>th</sup> century complete Greek Revival villa built for Richard Carruthers	E:343880 N:559290	Post Medieval (Regency)
28	43174	West Lodge, Eden Grove	One of two lodges to Eden Grove	E:343420 N:559340	Post Medieval (Victorian)
29	43175	East Lodge, Eden Grove	The site of one of two lodges to Eden Grove	E:343870 N:559530	Post Medieval (Victorian)
30	43464	Low Crosby Clamp Kiln, Crosby on Eden	The possible remains of a clamp kiln was found during an evaluation for a flood alleviation scheme around the eastern side of Low Crosby village in 2009. No structural evidence was seen, but an undated mixed spread of coal,	E:344850 N:559600	Unknown

Site No.	HER No.	Site Name	Description	NGR	General Period
			charcoal and slag material was found lying on the natural alluvium		



## APPENDIX 2: FIGURES

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North Pennines Archaeology Ltd  
2010

PROJECT: Linstock FTS, Carlisle, Cumbria

SCALE: 1:30 000 at A4

REPORT No: CP1286/10

CLIENT United Utilities

DRAWN BY: FW

DATE: November 2010

FIGURE: 1

KEY:

— Proposed Pipeline Route



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Figure 1: Site Location

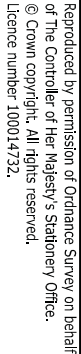




Linstock FTS, Carlisle, Cumbria

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KEY:



CP1286/10

2

Figure 2: Proposed Pipeline Route

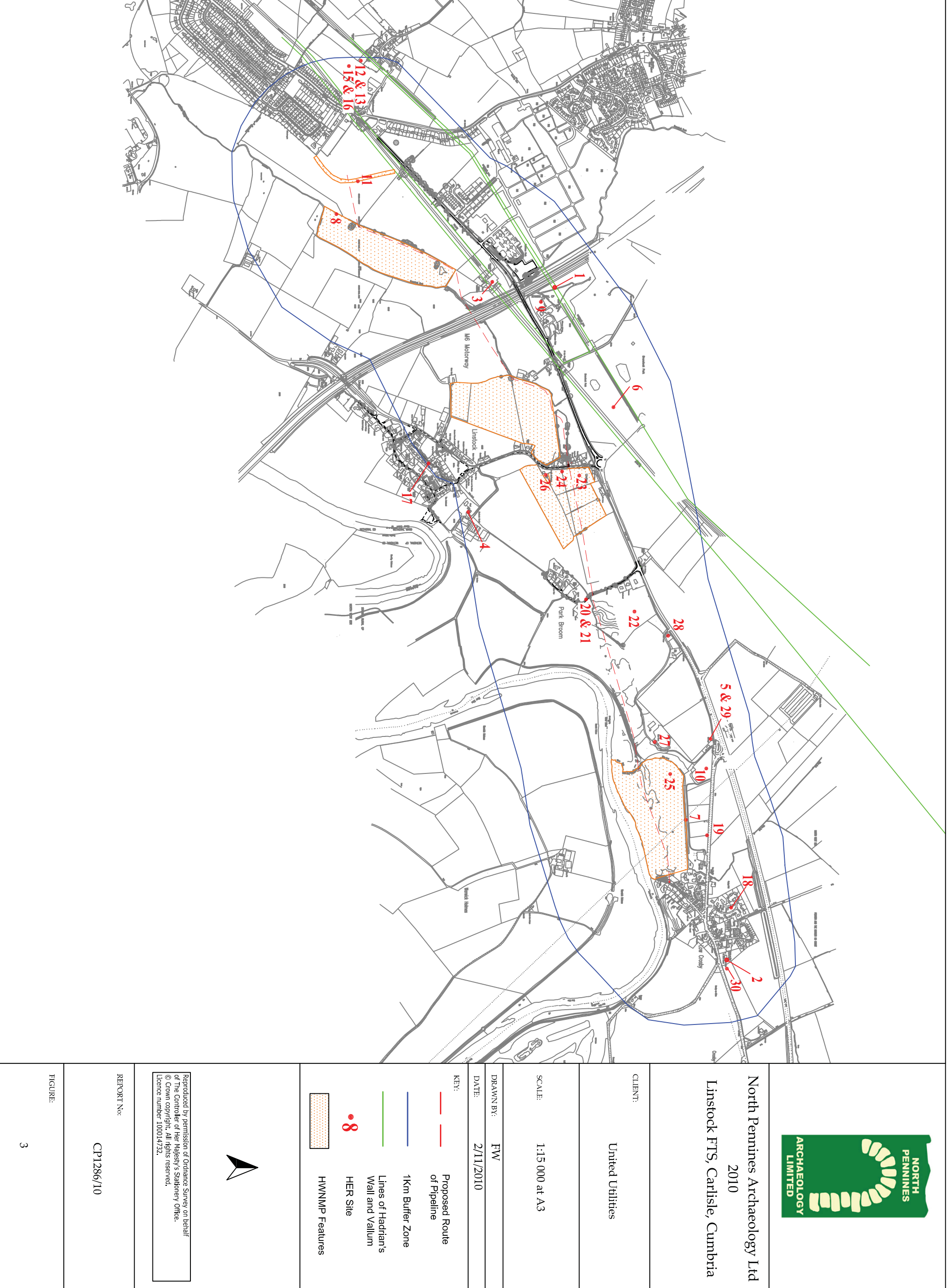
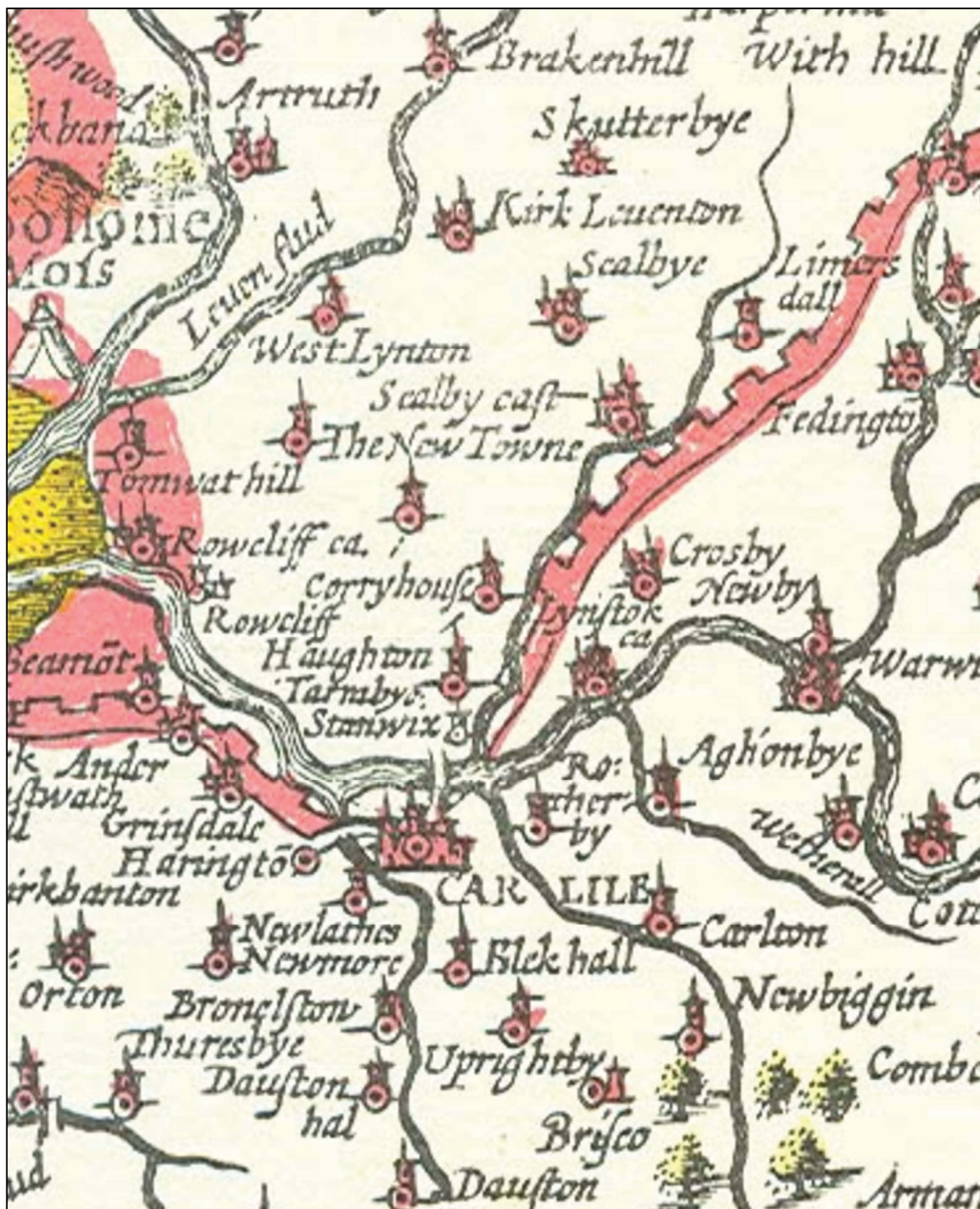


Figure 3: Location of HER Sites within a 1km buffer zone of the proposed pipeline route





North Pennines Archaeology Ltd  
2010

PROJECT: Linstock FTS, Carlisle, Cumbria  
SCALE: Not to Scale  
REPORT No: CP1286/10  
CLIENT: United Utilities  
DRAWN BY: FW  
DATE: November 2010  
FIGURE: 4



Figure 4: Extract from John Speed's Map of Cumberland 1610





North Pennines Archaeology Ltd  
2010

PROJECT: Linstock FTS, Carlisle, Cumbria

SCALE: Not to Scale

REPORT No: CP1286/10

CLIENT United Utilities

DRAWN BY: FW

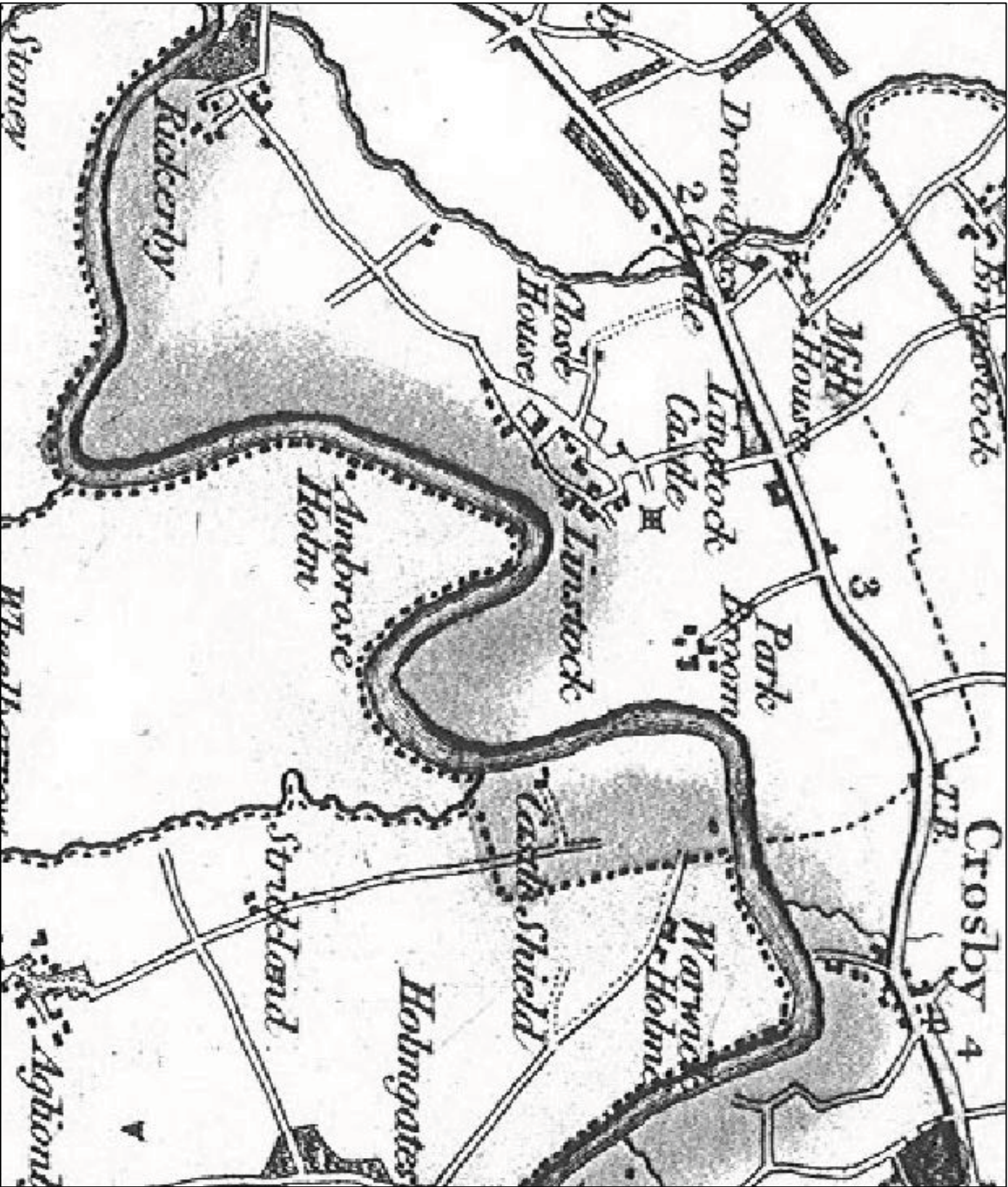
DATE: November 2010

FIGURE: 5



Figure 5: Extract from Hodkinson and Donald's Map of Cumberland 1774





North Pennines Archaeology Ltd  
2010  
Linstock FTS, Carlisle, Cumbria

CLIENT:  
United Utilities

SCALE: Not to Scale

DRAWN BY: FW  
DATE: November 2010



REPORT No:  
CP1286/10

FIGURE:  
6

Figure 6: Extract from Greenwood's Map of Cumberland 1823





North Pennines Archaeology Ltd  
2010

Linstock FTS, Carlisle, Cumbria

CLIENT:

United Utilities

SCALE: 1:12 000 at A3

DRAWN BY: FW

DATE: November 2010

KEY:

Approximate Line  
of Proposed  
Pipeline Route



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REPORT No.:

CP1286/10

FIGURE:

7

Figure 7: First Edition Ordnance Survey Map 1868, 6" to 1 mile scale



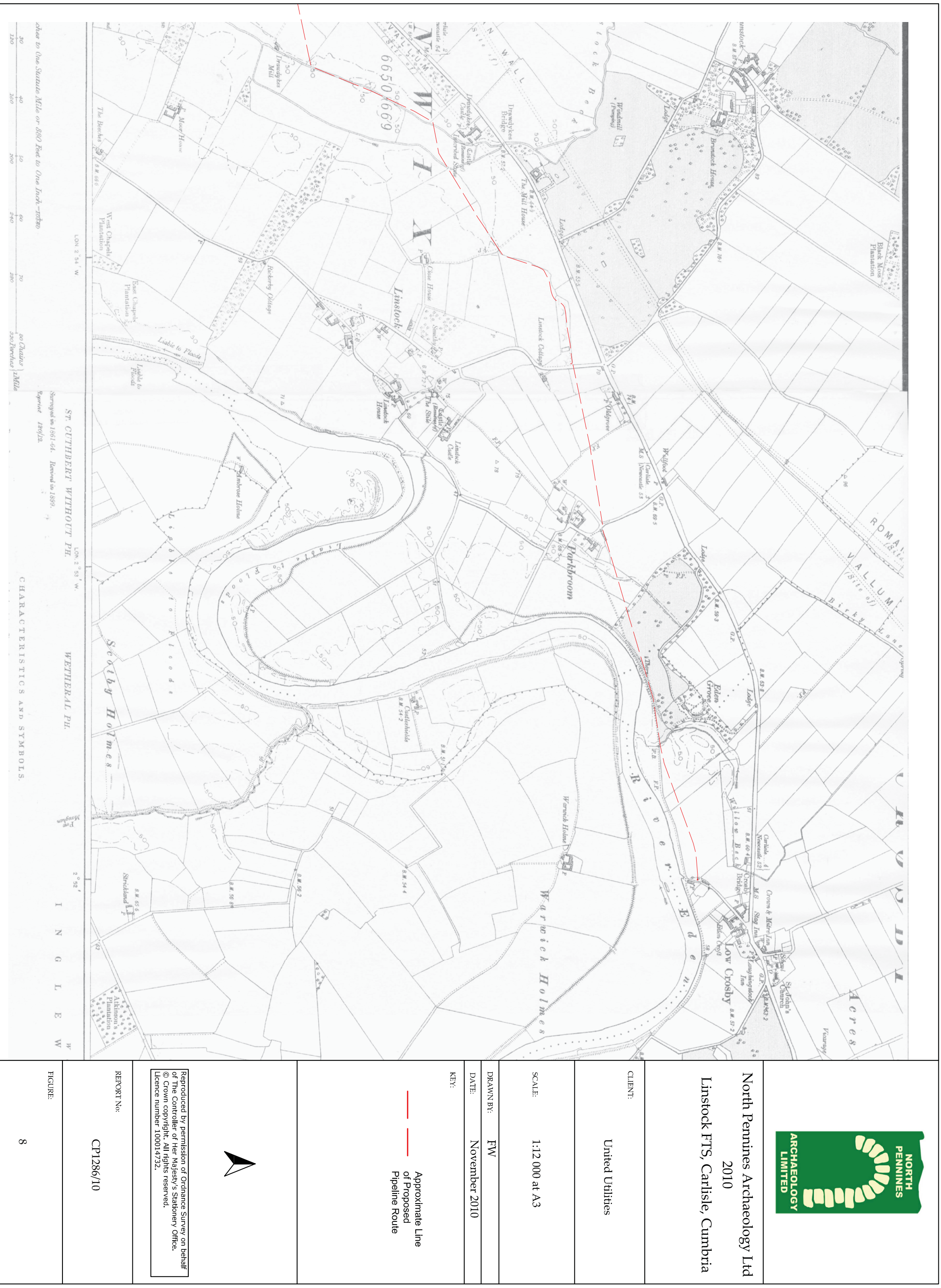






Figure 9: Ordnance Survey Map 1926, 6" to 1 mile scale



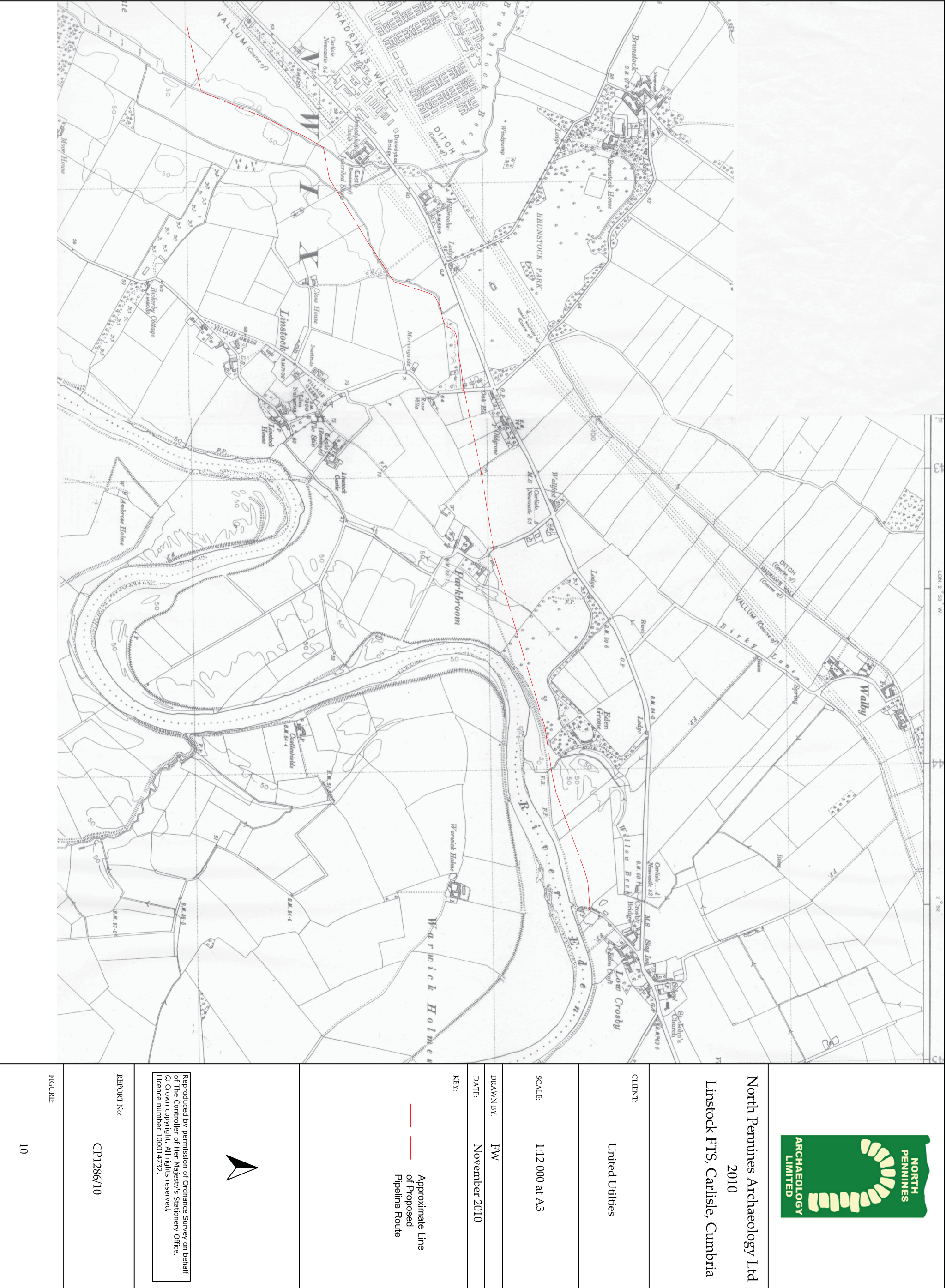


Figure 10: Ordnance Survey Map 1946, 6" to 1 mile scale