



WADDINGTON TO LOWCOCKS PIPELINE, CLITHEROE LANCASHIRE

Topographic Survey and Watching Brief



Oxford Archaeology North

March 2008

United Utilities

Issue No: 2006-07/646

OAN Job No: L9550

NGR: SD 72793 44166 -

SD 73312 43342

Document Title: WADDINGTON TO LOWCOCKS PIPELINE, CLITHEROE,
LANCASHIRE

Document Type: Topographic Survey and Watching Brief

Client Name: United Utilities

Issue Number: 2006-07/646
OA Job Number: L9550

National Grid Reference: SD 72793 44166 - SD 73312 43342


Prepared by: Steve Clarke
Position: Assistant Supervisor
Date: March 2008

Mark Storey
Project Officer
March 2008

Checked by: Alison Plummer
Position: Senior Project Manager
Date: March 2008

Signed.....

Approved by: Alan Lupton
Position: Operations Manager
Date: March 2008

Signed.....

Oxford Archaeology North

Mill 3
Moor Lane Mill
Moor Lane
Lancaster
LA1 1GF
t: (0044) 01524 848666
f: (0044) 01524 848606

© Oxford Archaeological Unit Ltd 2008

Janus House
Osney Mead
Oxford
OX2 0EA

t: (0044) 01865 263800
f: (0044) 01865 793496

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

Oxford Archaeological Unit Limited is a Registered Charity No: 285627

Disclaimer:

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Oxford Archaeology being obtained. Oxford Archaeology accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person/party using or relying on the document for such other purposes agrees, and will by such use or reliance be taken to confirm their agreement to indemnify Oxford Archaeology for all loss or damage resulting therefrom. Oxford Archaeology accepts no responsibility or liability for this document to any party other than the person/party by whom it was commissioned.

CONTENTS

SUMMARY	3
ACKNOWLEDGEMENTS.....	4
1. INTRODUCTION.....	5
1.1 Circumstances of Project.....	5
2. METHODOLOGY.....	6
2.1 Project Design	6
2.2 Topographic Survey	6
2.3 Watching Brief.....	6
2.4 Archive.....	6
3. BACKGROUND.....	7
3.1 Location, Topography and Geology	7
3.2 Historical and Archaeological Background	7
4. TOPOGRAPHIC SURVEY.....	10
4.1 Introduction.....	10
4.2 Results.....	10
5. WATCHING BRIEF	14
5.1 Introduction.....	14
5.2 Results.....	14
5.3 Finds.....	15
6. DISCUSSION.....	16
6.1 Conclusion	16
6.2 Recommendations	16
7. BIBLIOGRAPHY.....	17
7.1 Primary and Cartographic Sources.....	17
7.2 Secondary Sources	17

8. ILLUSTRATIONS	19
8.1 List of Figures	19
8.2 List of Plates.....	19
APPENDIX 1: PROJECT DESIGN.....	20

SUMMARY

Following a proposal to construct a new link watermain between Waddington and Lowcocks (SD 72793 44166 - 73312 43342) by United Utilities, a programme of archaeological assessment was carried out by Oxford Archaeology North. This comprised a desk-based assessment and a walkover survey (OA North 2005).

As a result of this initial phase of investigation, it was recommended that a topographic survey be undertaken for a number of earthworks (Sites **4**, **8**, **14**, **15**, **21** and **30**). These sites comprised 13 areas of ridge and furrow, 11 field boundaries, three platforms and a quarry. The topographic survey, which was undertaken during the spring of 2006 revealed more extensive ridge-and-furrow cultivation than had previously been identified (Sites **09** and **11**). The survey also improved the definition of one of the undated building platforms (Site **14**) and the undated earthworks (Site **07**) east of the easement.

A watching brief was maintained during topsoil stripping activities along the route of the easement, following the completion of the topographic survey. The archaeological features observed during this final phase of work were relatively modern and of little archaeological consequence.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank United Utilities for commissioning the project.

Marc Storey and Kathryn Levey undertook the topographic survey, whilst Steve Clarke maintained the watching brief. Marc Storey and Steve Clarke wrote the report, and Mark Tidmarsh compiled the illustrations. Alison Plummer managed the project, and also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 Following a proposal by United Utilities to construct a new watermain link between Waddington and Lowcocks, Clitheroe, Lancashire (SD 73312 43342 – 72793 44166) a programme of archaeological recording was recommended by the Specialist Advisor (Archaeology) for Lancashire County Archaeological Service (LCAS). An initial phase of works comprising a desk-based assessment and a walkover survey was undertaken during August and September 2005 (OA North 2005). The results of these works prompted LCAS to recommend a second phase of works comprising a topological survey and a permanent presence watching brief. OA North produced a project design outlining the second phase of work to be carried out (*Appendix 1*). This report sets out the results of the topographic survey and watching brief programme in the form of a short document.

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 OA North submitted a project design (*Appendix 1*) in response to a verbal brief issued by the Specialist Advisor (Archaeology) at Lancashire County Archaeological Service (LCAS). The project design was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 TOPOGRAPHIC SURVEY

- 2.2.1 Based on the findings of the walkover survey, an enhanced Level 2 Topographic Survey was conducted on site, comprising location of the sites along the route of the pipeline using Global Positioning System (GPS) techniques. This was conducted with Leica differential GPS equipment, using real-time (RTK) corrections and equipped with mobile SmartNet technology to achieve an accuracy of $\pm 0.01\text{m}$. The digital survey data was transferred, via Leica Geo Office (V.3), as *dxf* drawing files into a CAD system (AutoCAD 2004), and was superimposed onto the embedded digital Ordnance Survey data (Fig 2). The descriptive records and sketch plans were hand annotated on-site on to pro-forma recording sheets. A photographic record of the sites was maintained in digital colour photography, which have been used to accompany the present report.

2.3 WATCHING BRIEF

- 2.3.1 A programme of field observation accurately recorded the location, extent and character of any surviving archaeological features and/or deposits during the course of the topsoil strip. This work comprised the observation during groundworks of any subsoil horizons exposed during the excavations, and the accurate recording of all archaeological features, horizons and artefacts identified during the programme.

2.4 ARCHIVE

- 2.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 1*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in the Lancashire County Record Office in Preston on completion of the project.

3. BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 The route of the pipeline falls within the area known as the ‘Bowland Fringe and Pendle Hill’ (Countryside Commission 1998). This is a transitional region between the upland core of the Bowland Fells and the flat landscape of the Lancaster and Amounderness coastal plain. It is mainly between 50m and 150m above sea level, and consists of an undulating rolling landscape, which is predominantly used for permanent pasture, mostly improved, with some woodland and arable land.
- 3.1.2 The underlying carboniferous geology is mainly of the Worsthorpe Shale Group, although there are areas of both Clitheroe and Chatburn Limestones. This is overlain by drift geology of cambrian stagnogley soils of the Brickfield 3 association (Soil Survey of England and Wales 1983).
- 3.1.3 The study area is historically in the parish of Mitton, and formerly part of Yorkshire, but was added to Lancashire following the boundary changes of 1974 (Freethy 2002).

3.2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 3.2.1 The following section is summarised from the desk-based assessment (OA North 2005), which provides a more comprehensive background to the study area. It is only intended to reproduce the content of the previous work where it provides an historical context and a general understanding of the factors that have shaped the heritage of the area. Site numbers in the text refer to the OA North assessment report (OA North 2005).
- 3.2.2 **Prehistoric Period:** elsewhere in the Pennines the investigation of erosion scars in the peat has uncovered sites previously covered (Newman and Hodgkinson 1997). It is likely that the Bowland Landscape and its fringes were populated by nomadic hunters from as early as 10,000 BC (Countryside Commission 1992), when much of the area was covered in broadleaved forests. Woodland clearance began in the Neolithic period, around 3,000 BC and this process continued throughout the Bronze Age (Middleton 1996). Evidence for late Neolithic/early Bronze Age activity in the area has been found in the form of sites at Bleasdale Circle and Oak Farm near Chipping, along with remains found in a cave above Whitewell and a possible group of tumuli on Waddington Fell (*ibid*). Iron Age activity in the region is only attested by palaeoecological evidence, which has indicated an increase in woodland clearance at this time (MacKay and Tallis 1994, 578). Only a single site of prehistoric date is known within the study area; the site of a barrow at Pinder Hill to the west of Waddington appears to be of Bronze Age date (OA North 2005).
- 3.2.3 **Romano-British Period:** by the end of the Iron Age the Bowland area was probably under the control of the Brigantes, who are thought to have had an

important centre at Ingleborough (Newman and Hodgkinson 1997, 20) to the north-west of the study area. The Romans occupied the central Pennines area, including Bowland, in the early AD 70s and a fort was established at Ribchester. The Roman road from Ribchester to Burrow in Lonsdale lay to the west of the study area but there is little direct evidence of Roman activity elsewhere along the route. There are no sites of Romano-British date known within the study area, although they may be present and as yet unidentified.

3.2.4 **Early Medieval Period:** there is little evidence for early medieval activity in the region, with the nearest known remains being found at Ribbleshead near Ingleborough, and the Minster site of Whalley. However, documentary evidence suggests that the Bowland area passed out of British control and was integrated into the Kingdom of Northumbria in the seventh century AD (Newman and Hodgkinson 1997, 21). The majority of place names in the region, such as Chipping and Waddington in the study area are of Anglo-Saxon origin, and these villages are likely to have been established before the onset of Viking settlement in the late ninth century (*ibid*). Traces of the Viking occupation can be seen in the place-names of the Bowland Region, for example Battersby (*ibid*), and in the origin of upland features such as ‘fell’, ‘moss’, ‘thwaite’ and ‘beck’ (Countryside Commission 1992, 13). The name Bowland itself has Anglo-Saxon origins, as ‘Boelanda’ or ‘the land by the bow’, in the sense of the bend of the River Ribble (Ekwall 1960, 56). The lands at Waddow and Bashall both have early origins although Waddow Hall and Bashall Hall themselves are later. Waddow and nearby Waddington are thought to derive from the Anglo-Saxon ‘Wada’ with Waddington being ‘The Tūn of Wada’s People’ (Ekwall 1960, 490; Smith 1961, 199), although the town is recorded in the Domesday Book as ‘Widitun’ (*ibid*). The town of West Bradford is also recorded in the Domesday Book as ‘Bradeforde’ (*ibid*, 58) and there is known to have been a settlement at Lees (of which Site 02 forms part) since the eleventh century (Newman and Hodgkinson 1997, fig 2). Environmental evidence indicates further depletion of the woodland cover throughout the Anglo-Saxon period, and cultivation of the heavy clay soils in the lower lying areas took place for the first time (*ibid*). This clearance continued throughout the tenth century. There are no known sites of early medieval date within the study area, although they may be present and as yet unidentified.

3.2.5 **Late Medieval:** at the time of the Norman Conquest the Bowland area was divided between the Earldoms of Northumbria and Mercia, with the River Ribble as its boundary. After the Conquest the lands were granted to Roger de Poitou and formed part of the original county of Lancashire. In these lands a wide hunting territory was established that continued until the twelfth century, after which the land was primarily used for cattle and horse rearing. After Roger de Poitou, the ownership of the land passed to Robert de Lacy in the early twelfth century. It was then decreed that no further hunting should take place on the land without the permission of the de Lacy family (Newman and Hodgkinson 1997, 22). As a result, Bowland and Pendle, along with Trawden and Rossendale became a chase rather than a forest; a forest at that time being a specific legal term referring to land reserved for hunting and held by the King (Countryside Commission 1992, 14). In the later medieval period there

was a decline in the importance of hunting in the area, and a rise in cattle rearing. It is thought that many of the medieval vaccary, or cattle ranching, sites may be obscured or indeed still occupied by post-medieval farms (Newman and Hodgkinson 1997, 24).

- 3.2.6 Towns such as Clitheroe were granted charters in the mid-thirteenth century (White 1996, 127). Waddington's moment of fame in the medieval period came when King Henry VI was betrayed and captured at Waddington Hall following his defeat at Hexham, in 1465 (Whitaker 1878, 31). A chain, said to have been attached to his spur, was found at Waddington Hall and remains in the Lancashire Record Office (DDWh 9/5).
- 3.2.7 Areas of medieval ridge-and-furrow can be dated by the form of the ridges, which are considerably more curved and wider than later examples (Higham 2004, 58). Several other areas of ridge-and-furrow may also be medieval, but are less easy to date (Sites **03-05**, **09-11**, **17-18**, **20**, **22**, **24**, **26** and **28**). Other sites that may be of medieval date include the trackways and boundaries (Sites **01-02**, **06-07**, **10**, **13**, **15**, **21**, **23**, **25** and **27**) which appear alongside the ridge-and-furrow. A small group of earthwork features (Site **07**) appearing to represent enclosures, and three building platforms (Sites **02**, **14** and **16**) may also date from this period. These sites reflect the enduring combination of arable and pastoral agriculture.
- 3.2.8 **Post-Medieval Period:** the existing landscape of small to medium-scale irregular fields surrounding small villages and hamlets, largely developed due to the growth of the medieval vaccaries into multi-tenanted nucleated settlements (Newman and Hodgkinson 1997, 26). Post-medieval vernacular stone buildings with stone-flagged or slate roofs make up the core of the settlements and farms. In many cases fields marked with ridge-and-furrow surround these. The development of small-scale quarrying and mining in this period has left behind disused quarries and lime kilns. At Waddington, a fulling mill, dye house and tenter field are known to have existed before the eighteenth century (Rothwell 1990, 29-30) and towards the end of the eighteenth century a tannery and tile works were established (*ibid*). At West Bradford a medieval corn mill was rebuilt a number of times, and although by c1840 corn milling had ceased, it was used for bone crushing, bobbin turning and chairmaking (*ibid*).
- 3.2.9 The gravel pit (Site **08**) is most probably a post-medieval feature, and some of the boundaries (Sites **10** and **13**) appear to reflect post-medieval rather than medieval landscape organisation. The group of earthwork features (Site **07**) and the three building platforms (Sites **02**, **14** and **16**) may also date from this period.
- 3.2.10 **Modern Period:** the modern landscape in the region has changed little since the post-medieval period, with the principal settlements being the market town of Clitheroe and the villages of Waddington and West Bradford. Some or all of the earthwork sites (none of which are securely dated) may represent modern activity.

4. TOPOGRAPHIC SURVEY

4.1 INTRODUCTION

4.1.1 The initial programme of work (OA North 2005) identified a total of 32 sites. Of these, 28 were subject to the topographic survey. The sites surveyed comprised: 13 ridge-and-furrow systems (Sites **03**, **04**, **05**, **09**, **10**, **11**, **17**, **18**, **20**, **22**, **24**, **26** and **28**); 11 field boundaries and trackways (Sites **01**, **02**, **06**, **07**, **10**, **13**, **15**, **21**, **23**, **25** and **27**); three platform mounds (Sites **02**, **14** and **16**); and a quarry (Site **08**). The location and extent of these sites are shown on Figure 2. Full descriptions of these sites are presented in the 2005 report. The purpose of the results below is not to repeat the full description but rather to add any additional detail or highlight new sites.

4.2 RESULTS

4.2.1 *Site 01* (Figs 2 and 3): a series of relict embanked field boundaries and trackways were recorded. Two sunken features were aligned approximately north-east/south-west and north-west/south-east. The north-east/south-west trackway intrudes into adjacent ridge and furrow (Site **03**).

4.2.2 *Site 02* (Figs 2 and 3): a small building labelled ‘Mercer’s’ with adjacent tracks on the 1850 Ordnance Survey map (OA North 2005, 15), was recorded as a building platform with associated embanked trackways aligned approximately east/west.

4.2.3 *Site 03* (Figs 2 and 3): a small area of ridge-and-furrow earthworks identified from aerial photography (OA North 2005, 16) was recorded immediately to the east of Site **02**. These were aligned north-west/south-east, and appear to have been subdivided by a trackway, which formed part of Site **01**.

4.2.4 *Sites 04 and 05* (Figs 2 and 4): an area of ridge-and-furrow earthworks identified from aerial photography (OA North 2005, 16) was recorded as east/west aligned earthworks during the survey (Fig 2). Those comprising Site **05** were more tightly spaced than the adjacent earthworks comprising Site **04**, although as they follow the same alignment they may represent part of the same general cultivation regime.

4.2.5 *Site 06* (Figs 2 and 4): an earthwork comprising a sunken linear depression, aligned approximately north/south, appears to represent a trackway, which is flanked by Sites **04** and **06**.

4.2.6 *Site 07* (Figs 2 and 4): a series of small earthen field banks identified during the walkover survey (OA North 2005, 17) were recorded as three small platforms. An embanked trackway, aligned approximately east/west and located to the south of these platforms, was also surveyed.

4.2.7 *Site 08* (Figs 2 and 5): the gravel works identified during the desk-based assessment (OA North 2005, 17) were recorded as two gravel pits within a

larger ovoid depression, with a small trackway leading into the large depression from the south.

- 4.2.8 **Site 09** (Figs 2 and 5): a large area of ridge-and-furrow cultivation was identified and recorded during the current phase of works, as a probable extension of the field system to the north (Sites **10**, **11**, **17** and **18**). The earthworks were aligned approximately east/west, and overlapped the earthworks comprising Site **11**.
- 4.2.9 **Site 10** (Figs 2 and 5): the southernmost area of the ridge-and-furrow field system identified during the desk-based assessment (OA North 2005, 18) was recorded as a series of tight-packed furrows, aligned approximately east/west. These overlapped the earthworks comprising Site **11**, and appeared to be subdivided by the trackway comprising Site **12**.
- 4.2.10 **Site 11** (Figs 2 and 5): during the recording of a ridge-and-furrow field system identified during the desk-based assessment (OA North 2005, 18), a series of previously unidentified ridge and furrow earthworks were recorded on approximately north/south alignments. These were seen to be underlying Sites **9** and **10**.
- 4.2.11 **Site 12** (Figs 2 and 5): a previously unidentified embanked trackway was recorded during the survey of Site **10**. It measured approximately 110m in length and 5m in width. This comprised two linear embankments occupying an approximate north-east/south-west alignment, with an aperture approximately one third along its length. The westernmost of the two embankments appeared to correspond to the eastern end of a modern access track.
- 4.2.12 **Site 13** (Figs 2 and 5): a footpath recorded on modern Ordnance Survey mapping was also recorded during the topographic survey as a surviving feature. It appears as though this path may respect an earlier route (Site **15**).
- 4.2.13 **Site 14** (Figs 2 and 5): a rectangular platform located during the walkover survey (OA North 2005, 19) was recorded as a square platform with ephemeral traces of an adjoining precinct, which forms a rectangle on the eastern corner of the site. The overall dimensions of this site were 19m in length by 11m in width.
- 4.2.14 **Site 15** (Figs 2 and 5): a linear earthwork feature recorded as a ditch during the walkover survey (OA North 2005, 19) was surveyed, and appeared to represent a trackway. A hitherto unidentified eastward return at the southern end of the feature appeared to form a precursor to the modern footpath, skirting the southern edge of the ridge-and-furrow comprising Site **18** to the north.
- 4.2.15 **Site 16** (Figs 2 and 5): a circular platform located during the walkover survey (OA North 2005, 19) measured approximately 8m in diameter with a flat centre.

- 4.2.16 **Site 17** (Figs 2 and 5): a group of ridge-and-furrow earthworks was recorded to the immediate south of the West Bradford Road, aligned approximately east/west (parallel to the overall road alignment). This group of earthworks appeared to be bounded along the south-western side by a ditch feature (Site 19).
- 4.2.17 **Site 18** (Figs 2 and 5): a group of ridge-and-furrow earthworks was recorded to the south of the West Bradford Road, bounded to the south and west by trackways (Sites 13 and 15), and along the north-east by a ditch (Site 19).
- 4.2.18 **Site 19** (Figs 2 and 5): a ditch earthwork was recorded aligned approximately north-west/south-east. This feature formed part of a field system (Site 17) previously identified during the desk-based assessment and walkover survey (OA North 2005, 18).
- 4.2.19 **Sites 20, 21 and 22**: two groups of ridge-and-furrow earthworks were recorded to the north-east of Waddington Hospital (Figs 2 and 6). These earthworks were aligned approximately north/south and both groups (Site 20 and 22) were tightly packed. The two groups were divided by a slight embankment (Site 21) also aligned approximately north/south. The ridge-and-furrow comprising Site 20 overlapped those comprising Site 24 (*Section 4.2.21 below*).
- 4.2.20 **Site 23** (Figs 2 and 6): a slight linear depression was recorded during the survey in the centre of a field system identified during the desk-based assessment (OA North 2005, 21-2). This appears to have represented a field boundary, and was situated amongst the ridge-and-furrow system (Site 24) which alignment it followed.
- 4.2.21 **Site 24** (Figs 2 and 6): a group of ridge-and-furrow earthworks previously identified during the desk-based assessment (OA North 2005, 21-2) was recorded to the north of Waddington Hospital. The earthworks followed a north-east/south-west alignment, tightly-packed in places, and extending north and southwards from a field boundary (Site 23).
- 4.2.22 **Site 25** (Figs 2 and 6): a linear depression was recorded during the survey, corresponding to one of the field boundaries identified during the desk-based assessment (OA North 2005, 21-2). The earthwork was aligned approximately north/south and appeared to respect the line of an extant footpath to its east.
- 4.2.23 **Site 26** (Figs 2 and 6): a group of ridge-and-furrow earthworks previously identified during the desk-based assessment (OA North 2005, 21-2) was recorded to the north of Waddington Hospital. These earthworks were aligned approximately north/south and were tightly packed.
- 4.2.24 **Site 27** (Figs 2 and 6): a field boundary identified during the desk-based assessment (OA North 2005, 21-2) was recorded to the north of Waddington Hospital. A long section of the boundary formed an embankment aligned approximately north-east/south-west.
- 4.2.25 **Site 28** (Figs 2 and 6): a group of ridge-and-furrow earthworks previously identified during the desk-based assessment (OA North 2005, 21-2) was

recorded to the north of Waddington Hospital. These earthworks were aligned approximately north/south and were well-spaced.

5. WATCHING BRIEF

5.1 INTRODUCTION

5.1.1 The watching brief monitored the section of pipeline between Carter Croft and Waddington Brook, Waddington, which was approximately 2350m in length. The groundworks were monitored in six areas (1-6) along the length of the easement (Fig 2).

5.2 RESULTS

5.2.1 **Area 1:** the area was stripped for a distance of 340m to a width of 10m, from the south side of West Bradford Road, in a southerly direction following the eastern field boundary. The topsoil (**1000**) was a 0.1m to 0.2m deep layer of friable, dark brown, slightly sandy-silty-clay. Beneath the topsoil an orangey brown sandy-clay subsoil, **1001**, with occasional small-to-medium stones, was observed. Approximately 230m south of the northern end of Area 1 this subsoil changed abruptly to a blackish brown friable sandy-clay stony soil, of which <90% comprised small-to-medium sub-rounded stones with occasional large stone inclusions. This band of subsoil was approximately 70m in width and ran from north-east to south-west, sloping up to the west. Where the modern footpath crossed the easement, as shown on current Ordnance Survey mapping, a kerbed gravel footpath was revealed running from the west, and terminating 5.5m from the edge of the easement. A masonry footing, **1004**, surrounded by sandstone rubble, was observed to the south of the footpath; it was aligned east/west. On its north side a 4m by 2m surface of broken stone and brick fragments, **1005**, containing sherds of pottery was exposed. Three large flat stones, **1006**, measuring 1.8m across from east to west, and approximately 0.6m in width, were recorded approximately 4m south of wall **1004**.

5.2.2 **Area 2:** this area continued southwards from the boundary ditch at the southern end of Area 1, forming an area 77m long by 12m wide. The subsoil was similar to **1001**, but with bands of compact grey clay. Two field drains (**2002** and **2003**) were revealed: **2002** comprised a stone drain aligned east/west and close to the surface; and **2003** comprised a tile-lined drain aligned north-east/south-west buried at a depth of 0.5m.

5.2.3 **Area 3:** this continued south from Area 2 and was stripped for a distance of 85m by 10m in width, and terminated at a track aligned east/west. The subsoil, **3001**, was a fairly soft, dark brown sandy-clay. On the west side of the area was a 28m by 7m deposit (**3002**) comprising compact grey clay, with inclusions of building rubble and concrete.

5.2.4 **Area 4:** the easement south of Area 3 was stripped over 112m with a maximum width of 11m, terminating at Waddington Brook. The subsoil, **4001**, comprised an orangey-brown sandy-clay. Two deposits of medium-to-large sandstone were revealed: one (**4002**) located 13m south of the north end of

Area 4, and the second (**4003**) located 41m to the south of this. The features measured 6.5m and 4.5m long respectively, and both were 2.5m wide. These deposits probably represented rudimentary drainage.

- 5.2.5 **Area 5:** northwards from West Bradford Road the easement adjacent to the east side of Waddington Hospital wall was stripped for 165m. The south end of the easement was 3m wide and increased to 10m at a distance of 85m north of the hospital wall. The subsoil, **5001**, comprised an orangey-brown sandy-clay. Striations of topsoil approximately 1.2m apart were aligned north/south in the northern half of this area, which indicated the probable presence of ridge-and-furrow comprising part of Site **22** (Plate 2). The topsoil in the southern end of the easement was very thin, measuring between 0.05m and 0.1m thick. It covered a layer of hardcore, gravel and building rubble, which had probably been laid down to construct a track terminating at the northern end of the boundary walls.
- 5.2.6 **Area 6:** situated at right angles to the north end of Area 5, the easement was aligned east/west, and was stripped for a distance of 115m by 10m wide. The subsoil, **6002**, comprised a firm, slightly sandy-clay, containing 5% small-to-medium sub-rounded stone inclusions. A linear feature, **6003**, representing the southern end of a shallow bank running northwards beyond the easement (Site **25**), was observed measuring 8m across. This comprised a firm, mid-brown sandy-clay, similar in appearance to compacted topsoil.

5.3 FINDS

- 5.3.1 Occasional fragments of 19th and 20th century pottery, glass and clay pipe were retrieved during the watching brief. These were scattered throughout the easement area in the topsoil and on the surface of the subsoil, and were not retained.

6. DISCUSSION

6.1 CONCLUSION

- 6.1.1 The topographic survey revealed a more complex picture of agricultural arrangements than had been identified during the previous phase of works. The ridge-and-furrow field systems, with their boundaries, appear to represent at least two phases of activity (Site **09** overlaps Site **11**, and Site **20** overlaps Site **24**), which may possibly correspond to changes in land ownership and the layout of the tenure. Previously unidentified areas of ridge-and-furrow cultivation were also identified (Site **09** and **11**), as well as previously unidentified trackways or boundaries (Sites **01**, **06**, **10** and **13**). A small group of undated enclosures (Site **07**) was defined which, although most probably agricultural in nature, may be connected to the quarrying activity to the north (Site **08**). Topographic survey also revealed that the building platform comprising Site **14** was a bipartite structure, possibly an animal pen or a shieling.
- 6.1.2 The watching brief provided some evidence of agricultural activity along the easement in terms of drainage (**2002** and **2003**) and a stone-wall field boundary (**1004**). The area occupied by the rudimentary surfaces (**1005**, **1006**) indicates that particularly well-used activity areas required consolidation with the provision of hard-surfaces using waste material.
- 6.1.3 The overall impression given by the archaeological work is that former medieval and post-medieval agricultural regimes form the majority of the archaeological landscape. Minor industrial works (Site **08** and possibly Site **07**) represent the only exception to this trend.

6.2 RECOMMENDATIONS

- 6.2.1 The archaeological remains within the footprint of the pipeline works are of limited local significance, and the topographic survey has provided a form of preservation by record of the agricultural regimes. Other features were not impacted upon by the development, and due to the limited and confined nature of the development there are no recommendations for further archaeological mitigation.

7. BIBLIOGRAPHY

7.1 PRIMARY AND CARTOGRAPHIC SOURCES

DDWh 9/5, c1820 *Box Containing Chain and Papers Stating that the Chain was on a Spur of Henry VI Found at Waddington in 1465*, LRO(Preston)

Ordnance Survey, 1850 6": 1 Mile, Yorkshire Sheet **182**, surveyed 1847

Soil Survey of England and Wales, 1983 *Soils of Northern England*, **1**, 1: 250000

7.2 SECONDARY SOURCES

Countryside Commission, 1992 *The Forest of Bowland Landscape*, Cheltenham

Countryside Commission, 1998 *Countryside Character Volume 2: North West*, Cheltenham

Ekwall, E, 1960 *The Concise Oxford Dictionary of English Place Names*, 4th edition, Oxford

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

Freethy, R, 2002 Red or White, It's Still a Beauty
www.thisislancashire.co.uk/lancashire/archive/2002/04/20/LETFEATURES2ZM.html

Higham, NJ, 2004 *A Frontier Landscape: The North-West in the Middle Ages*, Macclesfield

MacKay, AW, and Tallis, JH, 1994 The Recent Vegetational History of the Forest of Bowland, Lancashire, UK, *New Phytologist* **128**, 571-84

Middleton, R, 1996 The Neolithic and Bronze Age, in R. Newman (ed) *The Archaeology of Lancashire*, Lancaster, 35-60

Newman, R, and Hodgkinson, D, 1997 *North West Water's Forest of Bowland Estate Lancashire: Archaeological Survey Report*, unpubl rep

OA North, 2005 *Waddington to Lowcocks Pipeline, Clitheroe, Lancashire: Desk-based Assessment and Walkover Survey*, unpubl rep

Rothwell M, 1990 *Industrial Heritage: A guide to the Industrial Archaeology of the Ribble Valley*, Accrington

Smith, A (ed), 1961 *The Place-Names of the West Riding of Yorkshire*, **6**, English Place-Name Soc **35**, Cambridge

Whitaker, TD, 1878 *The History and Antiquities of the Deanery of Craven in the County of York*, **1**, 3rd edition, Leeds

White, A, 1996 Medieval Towns, in R. Newman (ed) *The Archaeology of Lancashire*, Lancaster, 125-138

8. ILLUSTRATIONS

8.1 LIST OF FIGURES

Figure 1: Site Location

Figure 2: Location of Watching Brief Areas and Topographic Survey Sites

Figure 3: Topographic Detail of Sites **01**, **02** and **03**

Figure 4: Topographic Detail of Sites **04**, **05**, **06**, and **07**

Figure 5: Topographic Detail of Sites **08** to **19**

Figure 6: Topographic Detail of Sites **20** to **28**

8.2 LIST OF PLATES

Plate 1: Topographic Survey, Sites **01-03**, facing north

Plate 2: Probable ridge-and-furrow in Watching Brief Area 5

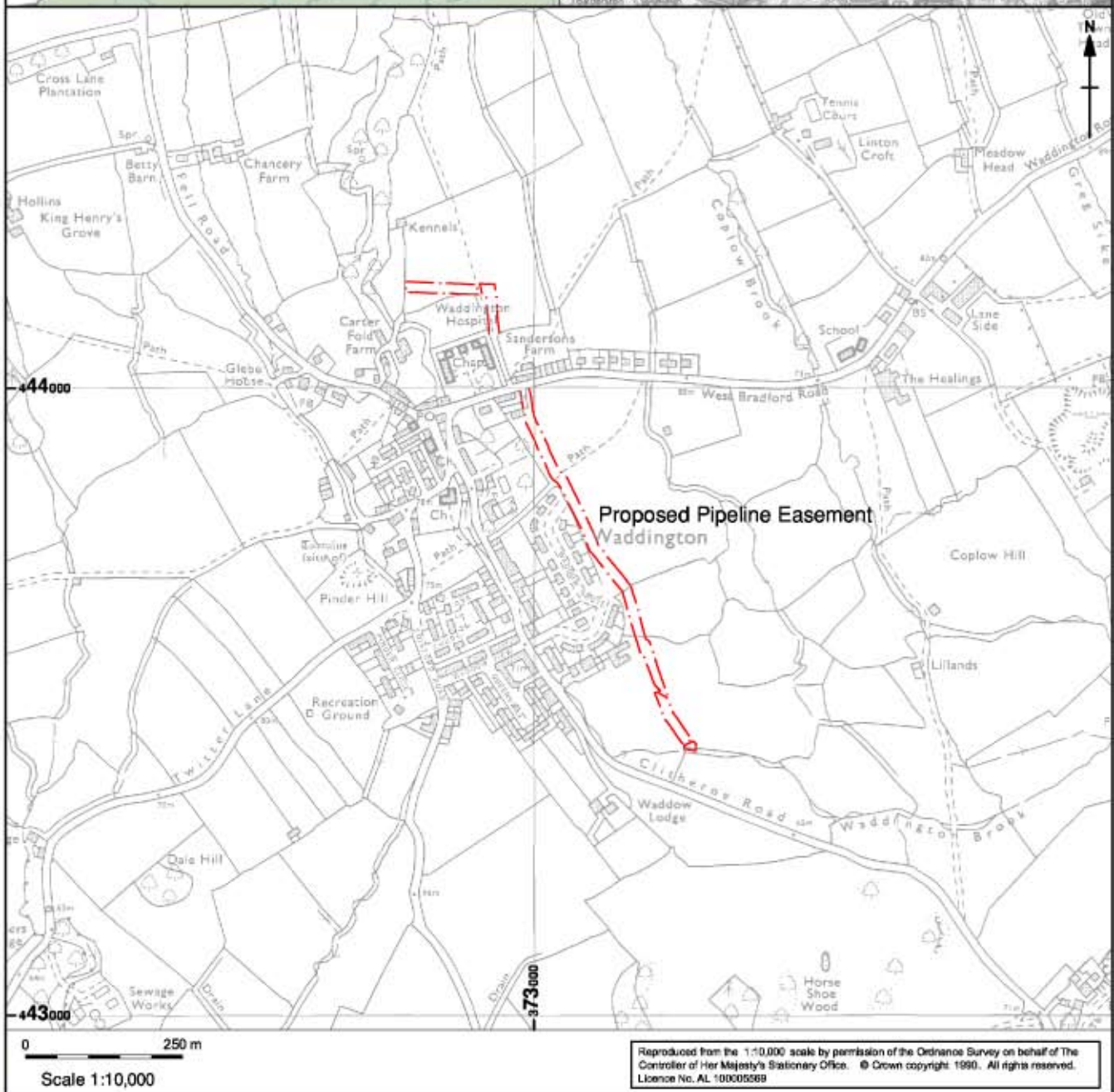


Figure 1: Site Location

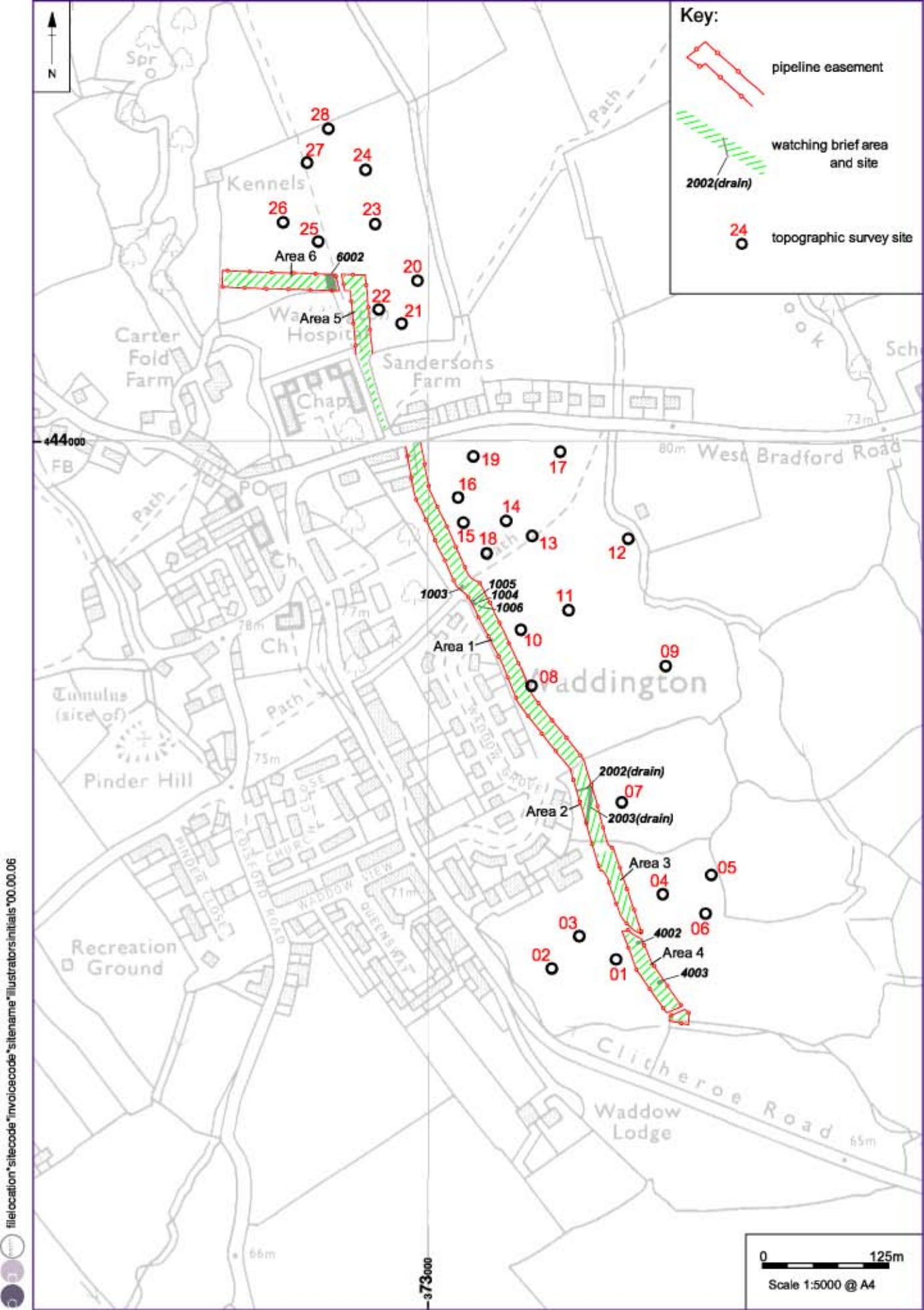


Figure 2: Location of watching brief areas and topographic survey sites

file:location*sitecode*invoicecode*sitename*illustratorsinitials*00.00.06

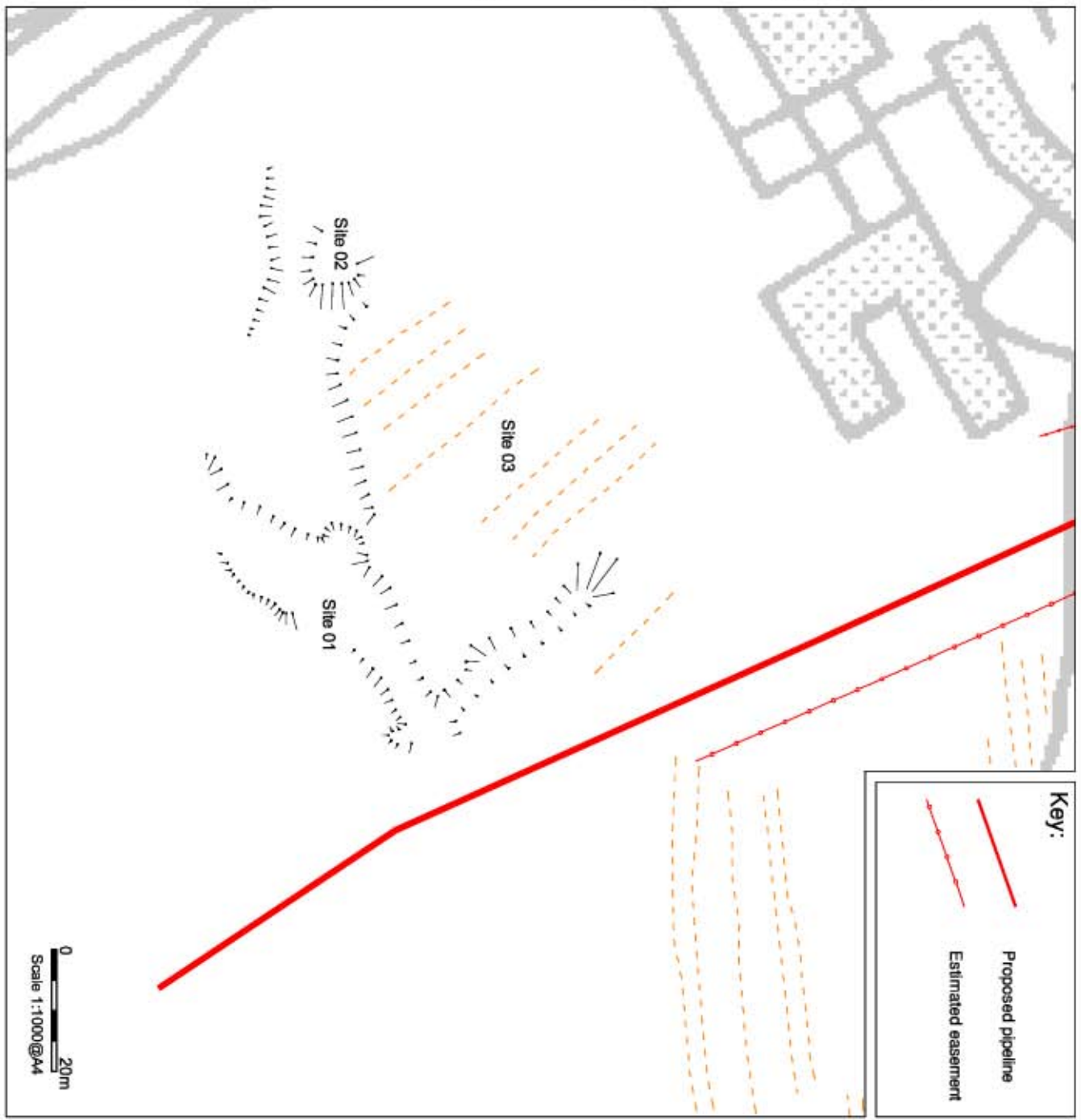
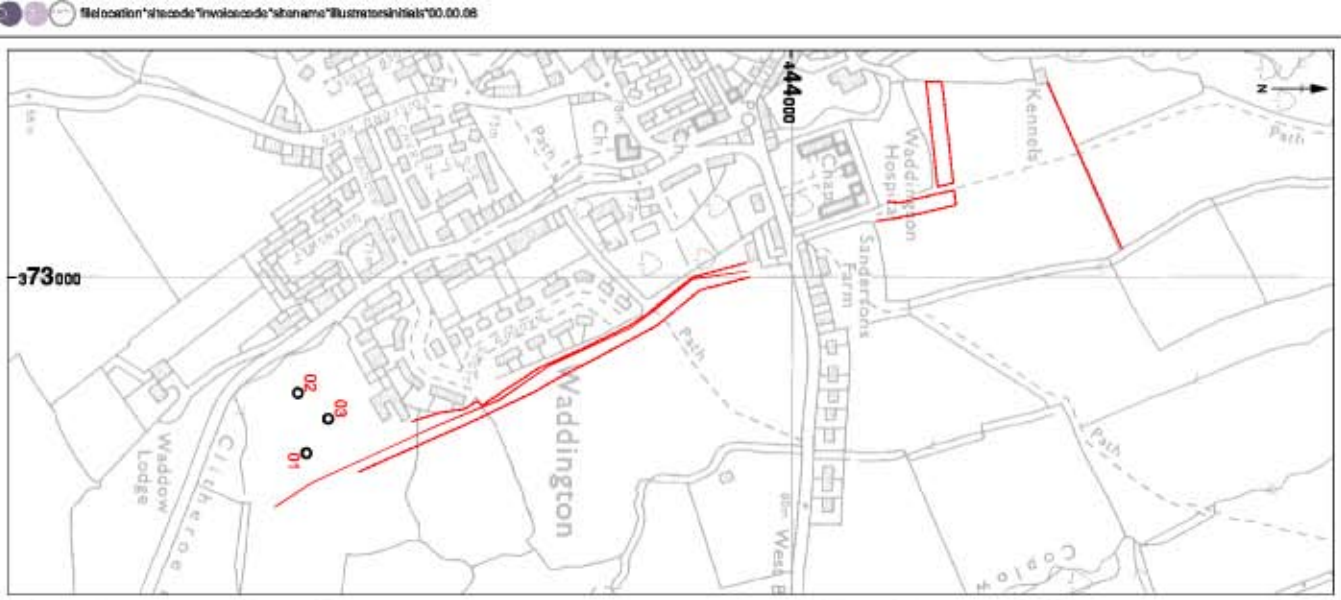
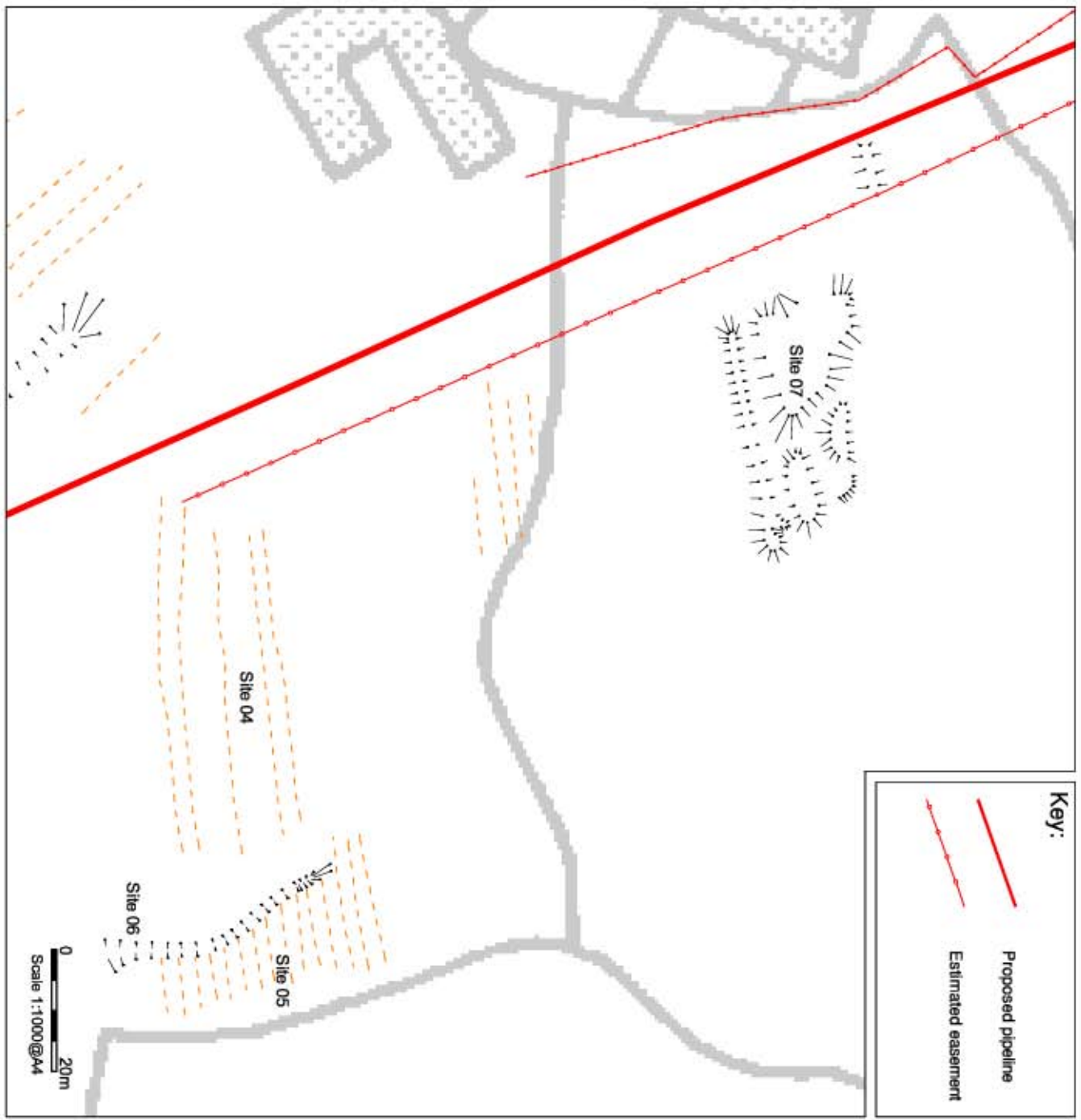
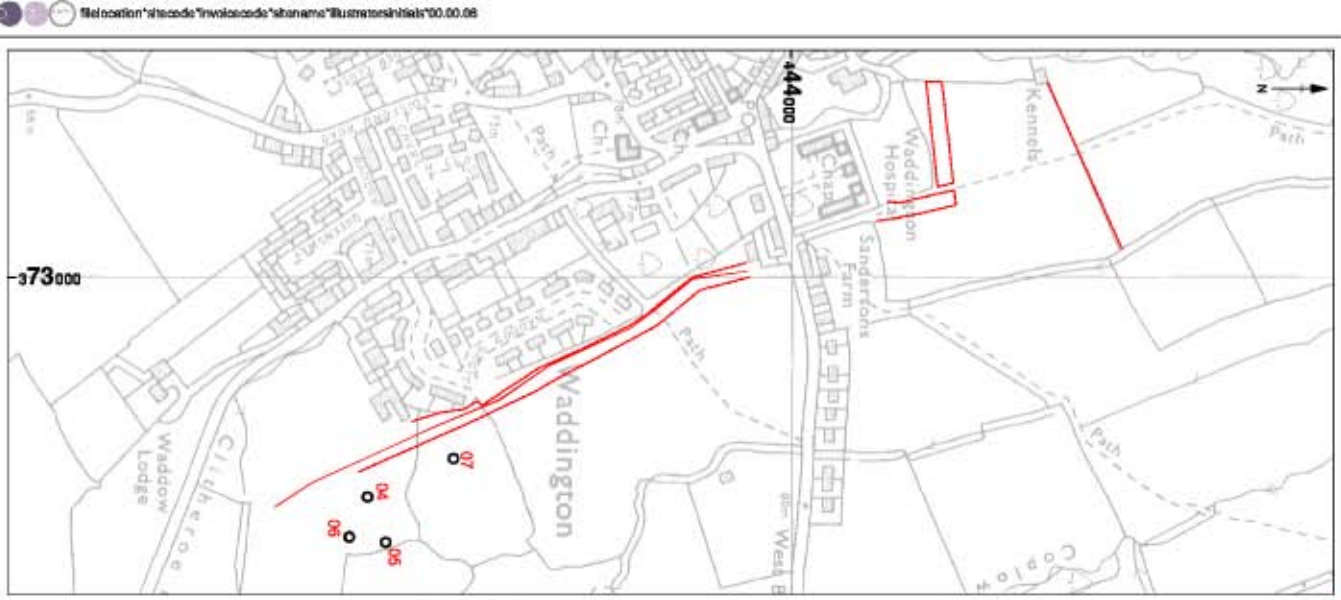


Figure 3: Topographic detail of Sites 01, 02 and 03



Key:



-  Proposed pipeline
-  Estimated easement

Figure 4: Topographic detail of Sites 04, 05, 06, and 07

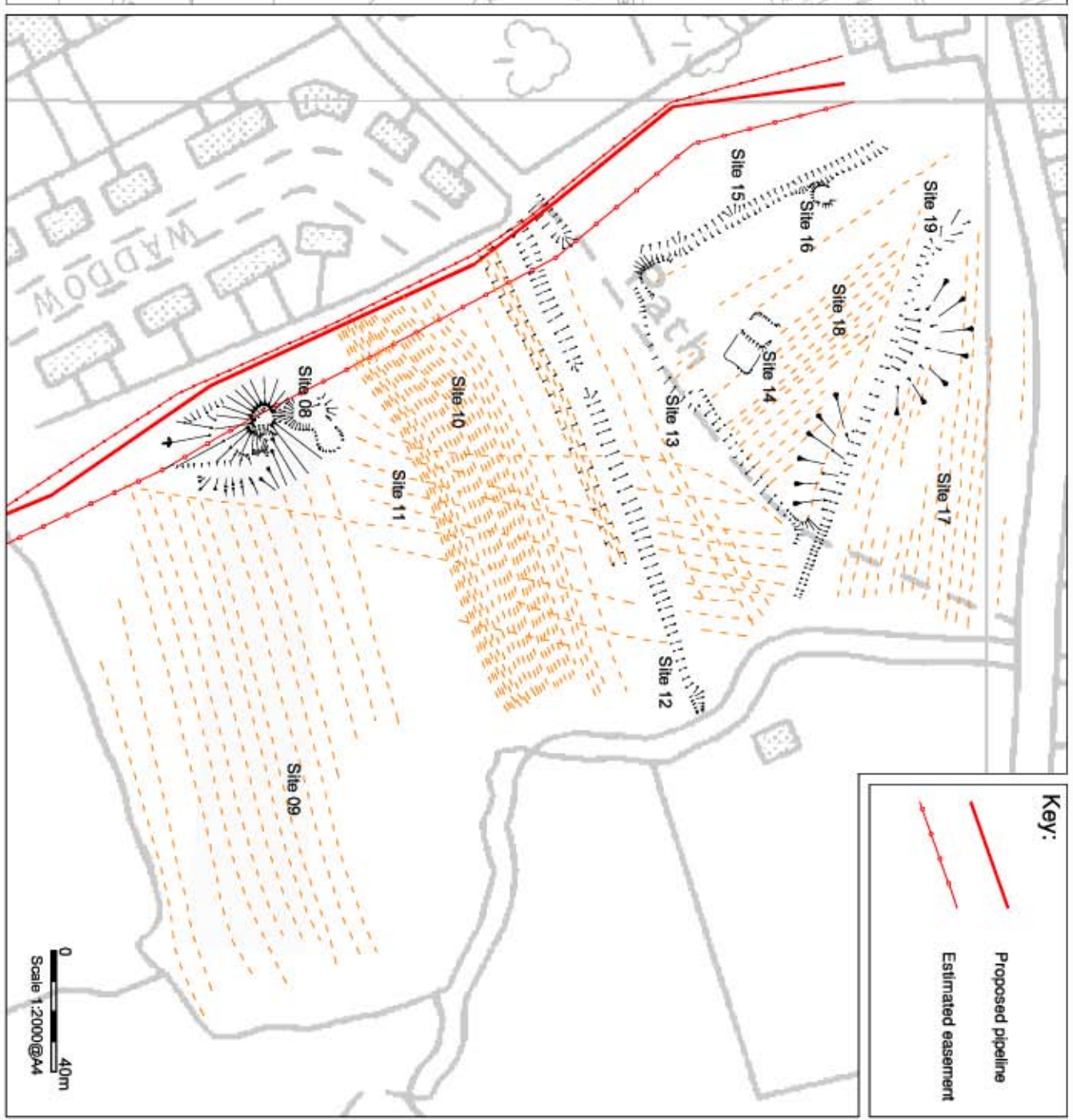
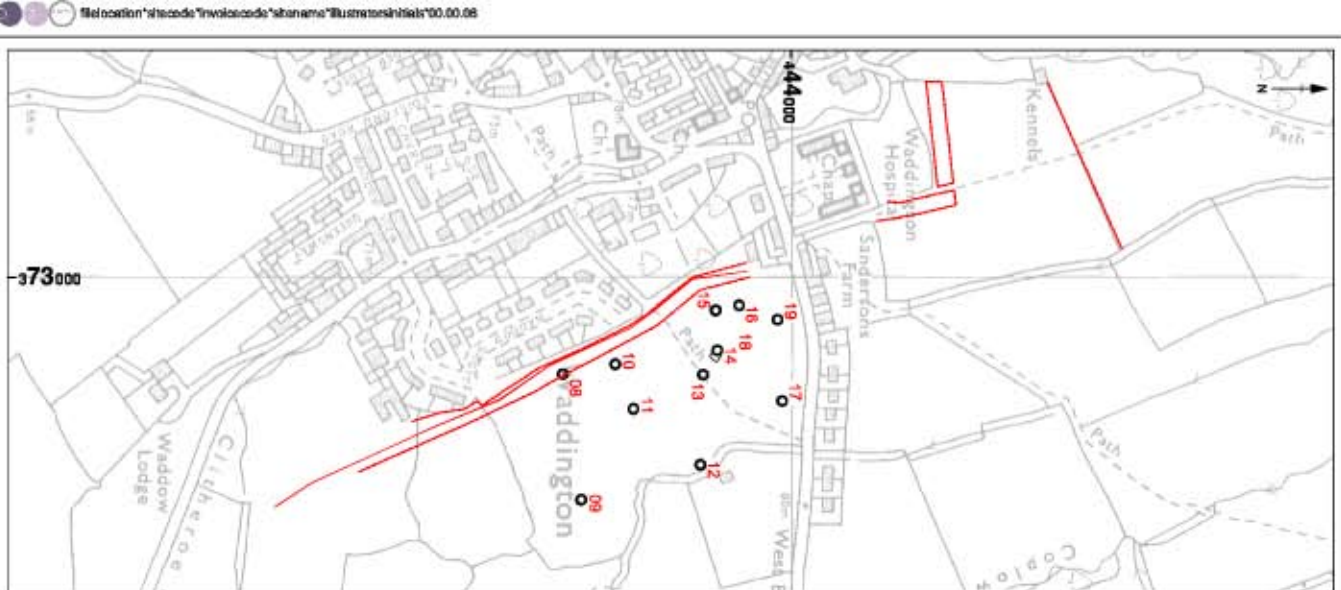


Figure 5: Topographic detail of Sites 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19

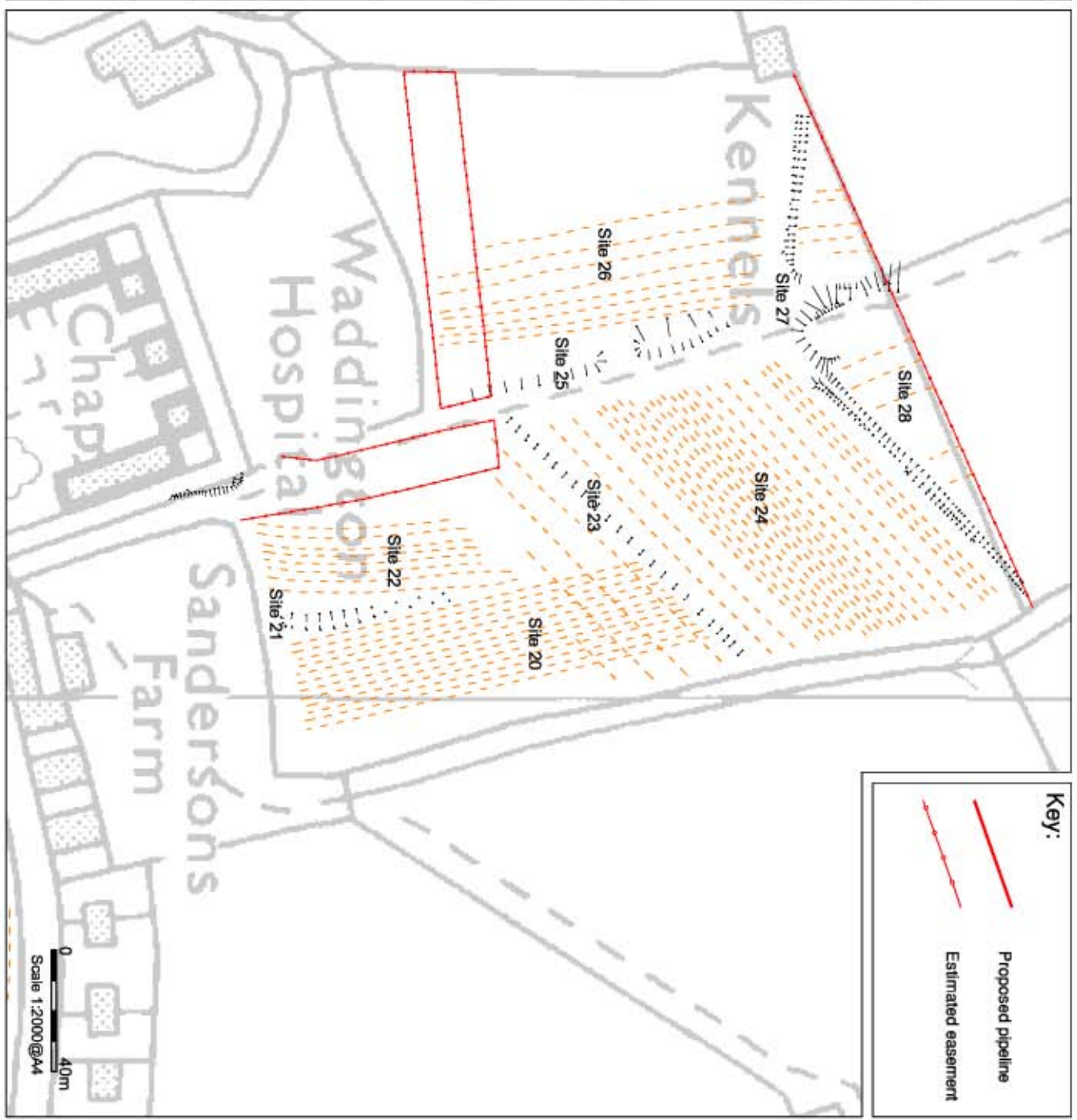
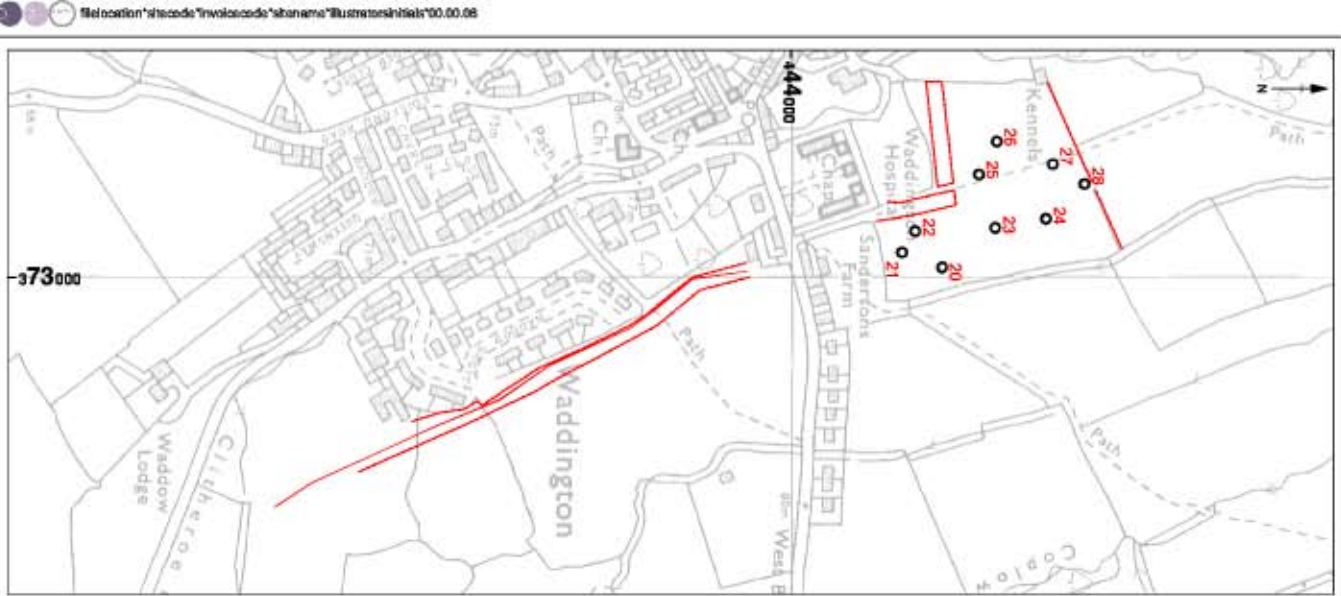


Figure 6: Topographic detail of Sites 20, 21, 22, 23, 24, 25, 26, 27 and 28



Plate 1: Topographic Survey, Sites **01-03**, facing north



Plate 2: Probable ridge-and-furrow in Watching Brief Area 5

APPENDIX 1: PROJECT DESIGN

WADDINGTON TO LOWCOCKS PIPELINE, CLITHEROE LANCASHIRE

Topographic Survey and
Watching Brief
Project Design

Oxford Archaeology North



January 2006

United Utilities

OA North Job No: L9550

Commercial in Confidence

1. INTRODUCTION

- 1.1 This project design has been compiled for United Utilities (hereafter the client). It presents proposals for a second phase of archaeological investigation of a proposed new main link at Lowcocks to Waddington, Clitheroe, Lancashire. Section 2 of this document states the objectives of the project, Section 3 deals with OA North's methodology. Section 4 addresses other pertinent issues including details of staff to be involved, and project costs are presented in Section 5.
- 1.2 Following the results of a desk-based assessment and walkover survey (OA North 2005) the Specialist Advisor (Archaeology) at Lancashire County Council (LCC) has recommended that a further programme of archaeological investigation is undertaken. This should comprise a topographic survey and watching brief to be undertaken of the proposed pipeline route as passes in close proximity to Waddington, a village with medieval origins. The Historic Landscape Characterisation puts the village as ancient settlement and the fields around as ancient enclosure.
- 1.3 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an **Institute of Field Archaeologists (IFA) registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct.

2. OBJECTIVES

- 2.1 The following programme has been designed for the purposes of the recording the form and extent of known above-ground archaeological remains along the route of the pipeline. The required stages to achieve these ends are as follows:
- 2.2 **Topographic Survey:** to survey in the sites shown in Table 1 below, located along the route of the pipeline;
- 2.3 **Watching Brief:** to maintain a permanent presence watching brief during all ground disturbance;
- 2.4 **Report and Archive:** production of a report following the collation of data during Section 2.2. A site archive will be produced to English Heritage guidelines (MAP 2) and in accordance with the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990).

3. METHOD STATEMENT

3.1 TOPOGRAPHIC SURVEY

- 3.1.1 The sites (Table 1 below) will be located using Global Positioning System (GPS) techniques, which uses electronic distance measurements along radio frequencies to satellites to enable a fix in Latitude and Longitude, which can be converted mathematically to Ordnance Survey National Grid. As long as differential GPS techniques are employed then it is possible to achieve accuracies of better than +/- 1m.
- 3.1.2 The data from the GPS will be downloaded into a CAD package (AutoCAD Release 14) for the production of topographic plans. Measured sketches and a photographic record (35mm colour slide and monochrome contact sheets) will

enhance the data collected. Scales will be used in all photographs and an index of photographs will be compiled.

- 3.1.3 The plans produced will show outline detail and hachures only. The final drawings will be produced at a relevant scale (1:1000 to 1:2500). It is envisaged that where possible, the plans will be dropped onto Ordnance Survey maps.

(Site numbers relate to the 2005 OA North desk-based assessment and walkover survey report)

Site No	Type	Period
08	Ridge and furrow	Post-medieval
14	Gravel pits	Post-medieval
15	Field system	Post-medieval
18	Field system	Post-medieval
19	Platform	Post-medieval ?
21	Ditch	Post-medieval
30	Field system	Post-medieval

Table 1: Affected sites along main route of pipeline subject to topographic survey

- 3.1.4 A brief written record will note the nature, extent, and condition of the features. This will utilise, and where appropriate, enhance the walkover gazetteer produced in the OA North 2005 report.
- 3.1.5 If finds are noticed they should be recorded and left in position, unless this would endanger their survival or later retrieval, or unless a more detailed examination is required of individual pieces. If finds are recovered they will be recorded and treated according to best professional practice.

3.2 WATCHING BRIEF

- 3.2.1 **Methodology:** a programme of field observation will accurately record the location, extent, and character of any surviving archaeological features and/or deposits within the topsoil stripping activities within those parts of the pipeline that are off-road. This work will comprise observation during the excavation for these works, the systematic examination of any subsoil horizons exposed during the course of the groundworks, and the accurate recording of all archaeological features and horizons, and any artefacts, identified during observation.
- 3.2.2 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid co-ordinates where appropriate). Features will be planned accurately at appropriate scales and annotated on to a large-scale plan provided by the Client. A photographic record will be undertaken simultaneously.
- 3.2.3 A plan will be produced of the areas of groundworks showing the location and extent of the ground disturbance and one or more dimensioned sections will be produced.
- 3.2.4 Putative archaeological features and/or deposits identified by the machining process, together with the immediate vicinity of any such features, will be cleaned

by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and where appropriate sections will be studied and drawn. Any such features will be sample excavated (ie. selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal).

- 3.2.5 It is assumed that OA North will have the authority to stop the works for a sufficient time period to enable the recording of important deposits. It may also be necessary to call in additional archaeological support if a find of particular importance is identified or a high density of archaeology is discovered. This would only be called into effect in agreement with the Client and the County Archaeology Service and will require a variation to costing. Also, should evidence of burials be identified, the 1857 Burial Act would apply and a Department of Constitutional Affairs Licence would be sought. This would involve all work ceasing until the proper authorities were happy for burials to be removed. In normal circumstances, field recording will also include a continual process of analysis, evaluation, and interpretation of the data, in order to establish the necessity for any further more detailed recording that may prove essential.

3.3 REPORT/ ARCHIVE

- 3.3.1 **Report:** the report will include the following:

- (i) a non-technical summary outlining the results of the survey;
- (ii) an introduction presenting the background and circumstances of the project;
- (iii) a method statement including sources of information consulted;
- (iv) the results of the topographic survey and watching brief;
- (v) a discussion of the impact of the proposed development and any relevant recommendations;
- (vi) a bibliography of sources;
- (vii) a copy of this project design;
- (viii) illustrations including copies of relevant historic maps, photographs and plans.

- 3.3.2 One bound and one unbound copy of the report will be submitted to the Client, and a further digital copy submitted to the Lancashire SMR within eight weeks of completion of the study.

- 3.3.3 Provision will be made for a summary report to be submitted to a suitable regional or national archaeological journal within one year of completion of fieldwork, if relevant results are obtained.

- 3.3.4 **Confidentiality:** all internal reports to the Client are designed as documents for the specific use of the Client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

3.3.5 **Archive:** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the SMR (the index to the archive and a copy of the report). Arrangements for deposition of the full site archive will be made the Lancashire County Record Office.

4 OTHER MATTERS

4.1 **Project Monitoring:** whilst the work is undertaken for the Client, the Lancashire Archaeological Officer will be kept fully informed of the work. Any proposed changes to the project design will be agreed with the Archaeological Officer and the Client.

4.1.1 **Access:** OA North will consult with the Client regarding access to the site.

4.1.2 **Health and Safety:** OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.

4.1.3 **Work Timetable:** the topographic survey is expected to take approximately ten days to complete. The duration of the watching brief will be dependent upon the progress of the contractor. The report will be completed within approximately eight weeks following completion of the fieldwork.

4.1.4 **Staffing:** the project will be under the direct management of **Alison Plummer BSc (Hons)** (OA North Senior Project Manager) to whom all correspondence should be addressed.

4.1.5 A suitably experienced OA North Project Supervisor will undertake the topographic survey accompanied by an assistant archaeologist. A project supervisor will also maintain the watching brief.

4.1.6 **Insurance:** OA North has professional indemnity to a value of £2,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.

5. COSTING

The first item below is a fixed price cost, inclusive of all management, overheads, and other disbursement costs (travel and expenses), to undertake the programme of work as defined in this project design; the second and third items are a fixed price rate. Any other variations from this programme of work at the clients' direction will require recosting. All staff costs are inclusive of holiday entitlement, as well as NI and Superannuation.

Topographic Survey	£ 4419.90
Watching Brief	£185.00 per day
Watching Brief Weekly Rate	£ 899.00 per week

Normal OA North working hours are between 9.00am and 5.00pm, Monday to Friday, though adjustments hours maybe made to maximise daylight working time in winter and to meet travel requirements. It is not normal practice for OA North staff to be asked to work weekends or bank holidays and should the client require such time to be worked during the course of a project a contract variation to cover additional costs will be necessary.

Commercial in Confidence

Salaries and wages inclusive of NI, Superannuation and overheads.

All costs are exclusive of VAT, which will be charged at the standard rate.

All costs at 2005/2006 prices.

Oxford Archaeology is the trading name of Oxford Archaeological Unit Ltd.

Oxford Archaeological Unit Ltd is a registered charity.