



Brigflatts WwTW
Sedbergh
Yorkshire Dales
National Park

**Walkover,
Topographic Survey,
Evaluation and
Watching Brief**



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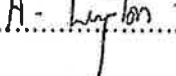
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SUMMARY

Oxford Archaeology North (OA North) undertook a programme of archaeological works, during October and November 2006, over a 1km stretch of pasture land between Brigflatts Farm and the sewerage works near Sedbergh, Yorkshire Dales National Park (NGR SD 6405 9105 to SD 6507 9119, Fig 1). This was undertaken in response to the verbal brief issued by the Yorkshire Dales National Park Conservation Archaeologist, and prior to installation of a water treatment pipeline by United Utilities. The programme of works included monitoring the excavation of geological test pits; a walkover survey; a topographic survey; evaluation trenching and a watching brief during topsoil stripping of the pipeline easement.

The archaeological remains observed during the programme of archaeological works were predominantly agricultural in nature, and post-medieval in origin. The remains comprised ridge and furrow (Sites **03**, **06**, **08** and **12**); sheep smoots (Sites **07**, **14-16**); a water trough (**09**); and a boundary (**13**). Other types of site included: quarries (Sites **10** and **11**); a weir (**05**); a ruined structure (**04**); a bridge (**02**); and the railway embankment (Site **01**)

The evidence gathered along the proposed pipeline route is very much in keeping with the historical, and current, culture and economy of the local and probably regional area.

ACKNOWLEDGEMENTS

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

Steve Clarke undertook the watching brief during the excavation of the test pits. Peter Schofield carried out the walkover survey, and Marc Storey undertook the topographic survey. Kelly Clapperton, assisted by Steve Clark, carried out the evaluation trenching. Pip Howarth and Kathryn Levey watched the topsoil stripping. Christine Howard-Davis assessed the finds. Kelly compiled the report and Mark Tidmarsh produced the illustrations. Alison Plummer managed the project, and also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 United Utilities propose to upgrade the existing Wastewater Treatment Works at Brigflatts near Sedburgh, located within the Yorkshire Dales National Park. This includes the installation of a new pipeline running for approximately 1km from the sewerage works to Brigflatts Farm (SD 6405 9105 to SD 6507 9119, Fig 1). An archaeological desk-based assessment produced by Oxford Archaeology North (2004) highlighted the close proximity of Holme Fell Earthworks, thought to be of prehistoric date and of regional importance. As a result, the Yorkshire Dales National Park Conservation Archaeologist issued a verbal brief for a further programme of archaeological works to be undertaken in order to determine the presence of previously unknown archaeological remains across the site.

1.2 LOCATION AND TOPOGRAPHIC SETTING

- 1.2.1 The route of the pipeline extends from the sewerage works at Birks Mill (SD 6505 9105) to the pumping station at Brigflatts Farm (SD 6507 9119), running east/west, and roughly following the line of the River Rawthey (Fig 1).
- 1.2.2 The site lies within the Howgill Fells as defined by the Countryside Commission (1998), an area of steep-sided hills cut by a large number of gills. The pipeline runs along the valley of the River Rawthey, through agricultural land and a small area of woodland, and to the south the ground rises up to Holme Fell.
- 1.2.3 The geology of the local area comprises outcrops of sandstone, siltstone and mudstone of Silurian age (Countryside Commission 1998). The overlying drift geology comprises typical brown earths of the Wick 1 series (Ordnance Survey 1983).

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 1.3.1 The archaeological desk-based assessment (OA North 2004) provided a comprehensive outline of the archaeological and historical background of the proposed development site. Although it is not the intention to wholly reproduce it here, the following is provided to put the results of the programme of works in their archaeological and historical context.
- 1.3.2 **Prehistoric:** there is a paucity of evidence for prehistoric activity within the local area, although to the east of Sedbergh there is evidence for cave dwelling dating back 10,000 years (Rawnsley and Singleton 1995). A stone circle of unknown date was recorded 7km to the north of the town, near Rawthey Bridge in the 18th century (Nicolson and Burn 1777). It was destroyed in 1822 when the bridge was expanded (Thompson 1892). Human remains dating to the Middle Bronze Age have been recovered from Rawthey Cave, near

Rawthey Bridge, along with some preserved footprints (Chamberlain *et al* 1998). To the south of the pipeline are two later prehistoric sites (OA North 2004); an enclosed settlement with associated field system, and another enclosed settlement with visible hut platforms; probably dating to the Iron Age.

- 1.3.3 **Roman:** the area around Sedbergh was rather isolated from the main hub of Roman activity in the North West. The main Roman road between Burrow in Lonsdale and Low Borrowbridge (OA North 2004) runs north/south to the west of the town, and was partially excavated to the north in the 1960s (Macadam 1964). Some of the human remains recovered from Rawthey Cave also date to the Roman period, but their significance is not known (Chamberlain *et al* 1998).
- 1.3.4 **Medieval:** the name Castlehow of the motte and bailey in Sedbergh suggests an Anglo-Saxon origin, although it is most likely to date to the medieval period (Thompson 1892, Bowden 1996). During the ninth century the Danes were encroaching on eastern Cumbria, and there is a suggestion that they reached Sedbergh, for example the name Millthrop contains the Danish element 'thorpe' (Sedgwick 1984). At the time of the Norman Conquest the lands around Sedbergh were held by the Earl Tostig, although by the time of the writing of the Domesday Book, most of the lands had passed to the Crown (Thompson 1892; Stacy 1997). By 1138 the lands were owned by Roger de Mowbray, however after this point the history becomes rather hazy (Thompson 1892). During the 12th century Adam de Stavely took control of much of the estate, and after his death in 1225 it passed to the Fitz-Hugh family (*ibid*). The estate then changed hands several times before finally passing to the Stricklands of Sizergh in 1424 (Platt 1876). In 1438 a market was officially established in Sedbergh, though it may have had earlier foundations (Hollett 1983, Scobie 1999). The medieval period closed with the establishment of Sedburgh School in 1523 by Dr Lupton, the Canon of Windsor and Provost of Eton (Bulmer 1905). Near the pipeline locale is evidence for medieval pastoral land use on Holme Fell, as well as Holme Deserted Medieval Village that is mentioned in the Lay Subsidy Rolls of 1332 (OA North 2004).
- 1.3.5 **Post-Medieval:** during this period there was some economic growth and increased agricultural activity in Sedbergh, part of a nationwide phase of building and rebuilding during the 16th century (Hoskins 1992). One of the major factors affecting the landscape during the 18th and 19th centuries was the process of industrialisation, which did not leave Sedbergh unaffected. During the early 19th century the manufacture of cotton was described as one of the main sources of income (Baines 1822), as shown by Birks Mill to the east of the current sewerage works (Ordnance Survey 1852). The construction of the London and North Western Railway in later 1800s opened the area further (OA North 2004), while several quarries were opened near by and a potash kiln was established on Holme Fell (*ibid*). During this period a cemetery was opened to the south-west of Sedbergh, and the Quaker Meeting House and burial ground near Brigflats Farm were established (*ibid*).

1.4 PREVIOUS ARCHAEOLOGICAL INTERVENTIONS

- 1.4.1 No documentation of previous archaeological work on the site was uncovered during the desk-based assessment phase of the current archaeological works (OA North 2004). Approximately 1km to the east of the site OA North undertook a topographic survey and watching brief of a pipeline in 2003 (OA North 2003). This revealed primarily medieval and post-medieval field boundaries and ridge and furrow cultivation.

2. METHODOLOGY

2.1 INTRODUCTION

- 2.1.1 A programme of both invasive and non-invasive archaeological works was requested by the Yorkshire Dales National Park Conservation Archaeologist. Initially, a watching brief was undertaken during the excavation of geological test pits and boreholes along the route of the pipeline; a walkover survey was then conducted across the area. Subsequently, a topographic survey was carried out on any upstanding monuments that would be impacted upon by the pipeline, followed by evaluation trenching along the pipeline easement. Finally, a watching brief was undertaken of the topsoil strip along the length of the pipeline. The archaeological works were undertaken during October and November 2006.
- 2.1.2 All elements of the work were recorded in accordance with current English Heritage guidelines (1991) and the best practices formulated by English Heritage's Centre for Archaeology (CFA).

2.2 TEST PIT WATCHING BRIEF

- 2.2.1 A watching brief was undertaken during the excavation six of geotechnical test pits and boreholes along the length of the pipeline easement (Fig 2). All groundworks were undertaken with a mechanical excavator fitted with a 0.5m wide toothed bucket, and under the constant supervision of an archaeologist. All horizons containing archaeological remains were hand cleaned and recorded. Once the test pits had been adequately recorded they were backfilled in stratigraphic order.
- 2.2.2 A daily record of the nature, extent and depths of groundworks was maintained throughout the duration of the project. Any archaeological features were recorded on OA North's *pro-forma* sheets, using a system based on that of the English Heritage Centre for Archaeology. A monochrome and colour slide photographic record was maintained throughout and, where appropriate, scaled plans and sections were produced to locate the presence of archaeological features as accurately as possible.

2.3 WALKOVER SURVEY

- 2.3.1 An enhanced Level I-type survey was undertaken to relate the existing landscape to research findings from the desk-based assessment (OA North 2004). This encompassed a one hundred metre wide corridor along either side of the pipeline, walked in a systematic fashion. Archaeological features identified within the landscape were recorded using the relevant OA North *pro-forma*, and the features accurately located using differential Global Positioning System (GPS) survey, which can achieve an accuracy of $\pm 0.25\text{m}$ with respect to the Ordnance Survey national grid.

2.4 TOPOGRAPHIC SURVEY

- 2.4.1 The topographic survey concentrated on the recording of breaks of slope in order to define the position and extent of features identified by the walkover survey that were within or partially within the easement of the proposed pipeline route (Fig 3). Four sites were targeted: two areas of ridge and furrow (Sites 06 and 12); the remains of a small quarry (Site 10), and an extinct stone-faced field boundary (Site 13).
- 2.4.2 The archaeological detail was mapped using Leica differential Global Positioning System equipment that used SMART Net technologies (RTK differentials) to achieve an accuracy of $\pm 0.05\text{m}$. The digital survey data was transferred, via SHP file format, into a CAD system (AutoCAD Map 2004), and was superimposed onto the provided Ordnance Survey data. The resulting drawings provide a record of the extant archaeological features, annotated with hachures to create an accurate topographical record. Descriptive hand written records were compiled for each surveyed feature. A photographic record was maintained in 35mm black and white print format, colour slide and digital photography.

2.5 EVALUATION TRENCHING

- 2.5.1 Eight trenches were excavated along the route of the pipeline easement (Fig 5). Each trench was excavated by a 360° tracked mechanical excavator fitted with a 1.9m toothless ditching bucket, and was under the constant supervision of an archaeologist. The topsoil was removed down to the natural geology to observe any archaeological remains cut into the subsoil. The trenches were then cleaned by hand, and all archaeological deposits identified excavated manually. Once the trenches had been cleaned, recorded and located within the easement, they were back-filled by machine in stratigraphic order.
- 2.5.2 All archaeological contexts were recorded using *pro-forma* sheets in accordance with those used by English Heritage. A similar system was used for recording trenches and objects. A full and detailed photographic archive was taken of individual trenches and archaeological features, as well as general views of the overall stages of the evaluation. Photography was undertaken using 35mm cameras on monochrome film and colour slides for archiving purposes. Digital photography was also employed throughout the fieldwork for presentation purposes. All photographic records were maintained on special photographic *pro-forma* sheets. All trenches excavated were surveyed using a Leica GPS 1200 Series, locating them directly into the Ordnance Survey.

2.6 TOPSOIL STRIP WATCHING BRIEF

- 2.6.1 A permanent presence watching brief was maintained during the removal of topsoil down to subsoil (to a maximum depth of 0.4m), along the length of the pipeline easement (Fig 5). These works were undertaken by a 360° mechanical excavator using a 2m flat ditching bucket. All exposed soil horizons were

examined and described, and spoil heaps were carefully checked for any unstratified finds. All features of archaeological significance identified were hand cleaned, photographed and recorded. The recording of the watching brief took the same form as that in *Section 2.2.2*.

2.7 FINDS

- 2.7.1 Finds recovery and sampling programmes were in accordance with current best practice following the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds* (1998), and is subject to appropriate expert advice. Artefacts were collected systematically during the mechanical excavation of topsoil and subsoil, and were handled as per best practice. During post-excavation all finds were washed, dried, marked, bagged and packed in stable conditions.

2.8 ARCHIVE

- 2.8.1 The results of the archaeological evaluation will form the basis of a full professional archive in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The original record archive and report will be deposited with the County Record Office, while a copy will be deposited with the Yorkshire Dales National Park. The Arts and Humanities Data Service (AHDS) online database *Online Access to index of Archaeological Investigations* (OASIS) will be completed as part of the archiving phase of the project.

3. FIELDWORK RESULTS

3.1 INTRODUCTION

3.1.1 This section provides the results of the five phases of archaeological investigations that were undertaken throughout the project. Firstly a watching-brief was maintained during the excavation of geotechnical test pits during December 2005 at six locations along the proposed pipeline (Fig 3, Section 3.2). This was followed by a walkover survey (Section 3.3), which identified three sites that were deemed significant enough for a topographic survey (Section 3.4). Subsequently, eight evaluation trenches were excavated during November 2006 (Fig 3, Section 3.5). Finally, a watching-brief was maintained, also during November 2006, throughout the topsoil stripping of the pipeline route, which also monitored the removal of the stone-faced field boundary bank (Section 3.6, Site 13).

3.2 TEST PIT WATCHING BRIEF

3.2.1 The results of the watching brief for the geotechnical test pits are summarised in Table 1 below. All contexts are listed in Appendix 3 and a plan of their location is presented in Figure 2. No significant archaeological features or deposits were observed.

Test Pit No.	Depths	Description
1	2.3m	2.6m x 0.7m, aligned north-west/south-east Topsoil 100 : mid-brown fine and friable sandy-clay, 0.2m depth. Subsoil 101 : slightly orange-brown fine friable clayey-sand, with inclusions of limestone boulders towards the base, 1.7m in depth. Natural 102 : grey-brown mixed sandy-clay and coarse gravel, with small sub-rounded stone inclusions, 60%, and large limestone boulders (0.3m-0.5m), 0.4m depth revealed. No features of archaeological significance were observed (Plate 1)
2	2m	2.3m x 1.1m, aligned north/south Topsoil 100 : 0.25m in depth Subsoil 101 : 1.75m in depth. No features of archaeological significance were observed (Plate 2)
3	2.1m	2.6m x 1m, aligned north/south Topsoil 100 : 0.2m in depth Subsoil 101 : 1.8m in depth. No features of archaeological significance were observed.
4	2.3m	3m x 0.8m, aligned north-east/south-west Topsoil 100 : 30% sub-rounded inclusions, 0.2m in depth Subsoil 101 : 50% medium-large limestone boulder inclusions, 1.8m

		in depth Natural 102 : 70% gravel inclusions. No features of archaeological significance were observed.
5	2.3m	2.9m x 0.8m, aligned north/south Topsoil 100 : 0.15m in depth Subsoil 101 : 2.15m in depth. No features of archaeological significance were observed.
6	2.9m	2.8m x 0.8m, aligned east/west Topsoil 100 : 0.05m in depth Clay sealing layer 103 : orange-brown clay, 0.95m in depth. Refuse tip 104 : deep deposit of modern domestic waste, consisted of an even mix of friable sandy-clay and grey-black ash. There were 30% inclusions of glass and ceramics, with the occasional ferrous object. Natural 102 : 0.4m revealed. No features of archaeological significance were observed (Plate 3)

Table 1: Results of test pit watching brief

3.3 WALKOVER SURVEY

- 3.3.1 **Introduction:** the walkover survey was undertaken in order to identify any upstanding archaeological features and to determine the presence or otherwise of the sites recorded during the desk-based assessment (OA North 2004). A site gazetteer (*Appendix 2*) has also been produced for all archaeological sites identified during the walkover survey, and a plan of the sites can be found on Figure 3. Sites **01-03** had previously been recorded in the desk-based assessment as Sites **09, 11** and **25** (OA North 2004).
- 3.3.2 All of the fields explored were under pasture and had a covering of short grass. The only parcel of land with denser vegetation was the woodland block to the west of Birks Mill; this had widely spaced trees and some bracken undergrowth. All field observations were carried out in almost perfect weather conditions.
- 3.3.3 **Results:** the descriptions of three sites identified through the desk-based assessment were enhanced through the walkover survey (Sites **01, 02** and **03**). The survey identified thirteen new sites of archaeological significance (Sites **04-16**).
- 3.3.4 The sites identified by the walkover form a cohesive pattern of relict agricultural cultivation. The field-systems are for the most part indicative of post-medieval cultivation, with elements of relict field boundaries, ridge and furrow cultivation and small-scale quarrying (Sites **06, 08**, and **10-12**; Plates 4 and 6). The majority of the boundaries of the current field-system are of drystone wall construction, with agricultural features such as sheep smoots and water troughs along their length (Sites **07, 09** and **14-16**; Plate 7). Another less common type of field boundary present, and possibly of earlier construction than the drystone walls, of a stone-face earthen boundary bank with plashed

hedges on top (Site 13, Plate 5). Such banked boundaries occur in a fragmentary fashion across the study area.

- 3.3.5 Those sites towards the western end of the study area are attributed to the nineteenth and twentieth centuries in date. The large derelict railway embankment and bridge across the river (Sites 01 and 02, Plate 8) were previously identified by the desk-based assessment. Other features include a stone weir with a possibly associated structure/generating building downstream (Sites 04 and 05).

3.4 TOPOGRAPHIC SURVEY

- 3.4.1 Of the 16 sites of archaeological interest identified during the walkover survey only four were at risk of being affected by the pipeline works (Sites 06, 10, 12 and 13). As a result, these sites were subject to topographic survey.
- 3.4.2 **Site 06** (Fig 4; Plate 4): this comprised two areas of ridge and furrow; one within the eastern half of the field and another in the western half. The eastern area of ridge and furrow was aligned north-west/south-east and survived to a height of 0.08m and a width of 2.5m to 3.0m. The western area was aligned north-east/south-west and survived to a height of 0.05m and a width of 5.0m to 7.0m. It was not possible to determine a physical relationship between the two distinct areas.
- 3.4.3 At the point where the eastern ridge and furrow met the north field boundary a deeper furrow or ditch was observed. This possibly represents a former field boundary. To the west of the deep furrow a shallow gully was present and this is thought to represent the footprint of a subsequently removed hedgerow. The gully is adjacent to an oval-shaped mound (9.0m x 6.8m x 0.55m), having a flat top. Although this is most likely to be a natural feature, the possibility that it is a platform should not be ruled out.
- 3.4.4 **Site 10** (Fig 4; Plate 6): the remnants of a stone quarry were observed atop a natural hillock. The semicircular depression measured 6.7m across with a depth of 0.8m. To the immediate north of the quarry was a low spread mound representing the waste and upcast material. Three further quarry cuts, much eroded, were recorded on the southern face of the hillock.
- 3.4.5 **Site 12**: (Fig 4) ephemeral traces of ridge and furrow were evident in a field to the west of Birks Mill. This was most obvious towards the western edge of the field, but even here the surviving earthworks were ephemeral at best, with a maximum height of 0.05m and width of 3.0-4.5m. The ridge and furrow was orientated north-east to south-west, parallel to the field boundaries.
- 3.4.6 **Site 13** (Fig 4; Plate 5): a relict field boundary curved round the natural contour at the western end of Field 3, just to the east of the quarry (Site 10). It measured approximately 60m in length and 2.3m in width. It comprised an earthen bank, faced with unworked sandstone and limestone boulders, measuring c0.2-0.5m in length. The extinct boundary extended into a small wood to the north-east end of the study area.

3.5 EVALUATION TRENCHING

- 3.5.1 Eight linear trenches 15m long and 1.9m in width were excavated to provide a 5% evaluation of the pipeline easement, in order to establish the presence or absence of unknown archaeological remains that would be affected by the pipeline works (Fig 5). All archaeological deposits observed were hand cleaned, assessed, and recorded to identify their date, nature, depth and quality of preservation. The results are summarised below. All contexts are listed in *Appendix 3*. No features of archaeological significance were identified.
- 3.5.2 Trench 1 was aligned east/west, and had a maximum depth of 0.4m. The topsoil, **100**, comprised a friable reddish-brown sandy-clay of fine consistency, measuring 0.15m in depth. The subsoil, **101**, was a red-brown firm sandy-clay. No features of archaeological significance were observed.
- 3.5.3 Trench 2 (Plate 10) ran east/west, and was 0.4m in depth. The topsoil, **200**, consisted of a red-brown fine, friable sandy-clay, 0.15m in depth. The subsoil, **201**, was a red-brown sandy-clay. No archaeological features were identified.
- 3.5.4 Trench 3 was aligned east/west, and was 0.3m in depth. It comprised of a topsoil, **300**, which was a mid-brown friable slightly sandy-clay, with 5% sub-rounded stone inclusions. This overlay a subsoil, **301**, of loose reddish glacial till that consisted of sandy-clay, with approximately 50% sub-rounded stone inclusions. No features of archaeological significance were observed.
- 3.5.5 Trench 4 was aligned east/west, and was 0.3m in depth. It consisted of a topsoil, **400**, being a slightly red-brown friable sandy-clay, 0.1m in depth. This overlay a subsoil, **401**, a red-brown firm sandy-clay with 40% sub-rounded gravel inclusions. No features of archaeological significance were identified.
- 3.5.6 Trench 5 (Plate 11) ran east/west and was 0.4m in depth. It consisted of topsoil, **500**, which was a slightly red-brown friable sandy-clay, 0.3m in depth. The subsoil, **501**, was a firm red-brown sandy-clay with 40% sub-rounded stone inclusions. No features of archaeological significance were observed.
- 3.5.7 Trench 6 was orientated south-west/north-east, and was 0.3m in depth. The topsoil, **600**, consisted of a reddish-brown friable sandy-clay, 0.15m in depth. The subsoil, **601**, is a red-brown slightly sandy-clay with 10% small-medium sub-rounded stones. No archaeological remains were identified.
- 3.5.8 Trench 7 (Plate 12) was aligned east/west, and was 0.3m in depth. Topsoil, **700**, consisted of a reddish-brown friable sandy-clay approximately 0.2m in depth. The subsoil, **701**, was a glacial till, a red-brown sandy-clay with 20% sub-rounded pebble inclusions. No remains of archaeological significance were identified.
- 3.5.9 Trench 8 was 0.4m in depth, and was aligned east/west. The topsoil, **800**, consisted of a red-brown friable sandy-clay, 0.15m thick. Subsoil, **801**, was a red-brown firm sandy-clay with <5% small-medium sub-rounded stone inclusions. No features of archaeological significance were observed.

3.6 TOPSOIL STRIP WATCHING BRIEF

3.6.1 A watching brief was maintained during topsoil stripping activities throughout all the fields along the pipeline route (Fig 5). The results of these observations are presented in tabular form below (Table 2). In addition, a targeted watching brief was maintained on the stone-faced field boundary bank (Site 13).

Field No	Location	Description
Field 1	Adjacent to sewage works	<p>The easement ran south-east/north-west across Field 1.</p> <p>Topsoil, 100, a mid brown silty-clay, was removed to 0.2m. Subsoil, 101, a light grey-brown sandy-clay, had inclusions of 20% rounded sandstones. No archaeological features were observed.</p>
Field 2	Situated to the north of Field 1	<p>The easement ran in a south-east/north-west direction across Field 2.</p> <p>Both the topsoil and subsoil were present as in Field 1. No archaeological features were observed.</p>
Field 3	Situated to the north-west of Field 2	<p>The easement runs roughly east/west through Field 3.</p> <p>Both the topsoil and subsoil were present as in Field 1.</p> <p>Towards the west end of the field were the remains of an old field boundary (Site 13), which ran north/south, to the east of the quarry (Site 10). The boundary, 102, was 2.3m in width and consisted of a very gritty sand, with 60% medium-large sandstone and limestone boulders, 0.2-0.5m length. A sondage was excavated through the field boundary to ascertain if an earlier field boundary existed, however, due to the unstable sections this proved to be impossible. Fragments of post-medieval pottery were recovered from this field.</p>

<p>Field 4</p>	<p>Situated to the west of Field 3</p>	<p>The easement runs east/west through Field 4.</p> <p>Both the topsoil and subsoil were present as in Field 1. Two modern fire pits were identified, 103 and 104.</p> <p>Pit 103 measured 1.16m by 1.09m and 0.13m deep. It was filled with charcoal 105; loose orange-sand 106; mid-grey sticky silty-clay 107; heat-affected white friable sand 108; compact purple silty-clay 109; and mid brown-purple compact silty-clay 110, with 20% rounded stones. Finds included fragments of glass, a metal nail and a knife, all were modern.</p> <p>The second pit, 104, was partially truncated by the machine, and was 0.9m in diameter and 0.03m in depth. It was filled with a band of orange sand, 112, (possibly heat affected), which overlay a brown-purple gravel, 111, with 60% small rounded stones.</p>
<p>Field 5</p>	<p>Situated to the west of the railway embankment</p>	<p>Eastern half of Field 5:</p> <p>The topsoil, 100, consisted of mid grey-brown silty-clay with 5% rounded to sub-rounded stones, it was stripped to a depth of 0.2m. The subsoil, 101, was a light orange-brown silty-clay, with round to sub-rounded sandstone pebbles, >10%.</p> <p>Western half of Field 5:</p> <p>The topsoil, 113, consisted of a dark black-brown silty-clay. The subsoil, 114, was a mid orange-brown clay.</p> <p>This area, in front of the small settlement of Brigflatts, had been heavily disturbed by the construction of modern sewage pipes and manholes. Some post-medieval pottery was collected from this field. No archaeological features were observed.</p>

Table 2: Results of the topsoil strip watching brief

3.7 FINDS RESULTS

- 3.7.1 **Introduction:** in total, fifty-six unstratified artefacts were found during the evaluation trenching and the watching brief of the topsoil strip. Predominant finds were post-medieval pottery (50 fragments), though some fragments of glass and clay pipe was also recovered. The date range was fairly variable, with artefacts dating from the seventeenth to the twentieth centuries respectively. The collection suggests scattered household debris, no doubt from the nearby town of Sedbergh. Nonetheless, the assemblage also displays a surprising typological variety, which was significant both locally and regionally.
- 3.7.2 **Pottery:** the earliest pottery dates to the seventeenth century, although the majority belongs to the eighteenth and nineteenth centuries. There are a number of sherds of transfer-printed types, of which there are many noteworthy examples. Two transfer-printed porcelain cup fragments, with transfer-printed *chinoiserie*, belong to the late eighteenth to early nineteenth centuries, and were probably fabricated in Staffordshire. A transfer-printed cup fragment with a town scene is likely to be more modern, dating from the late nineteenth century to the Edwardian period (Coysh, and Henrywood 2001).
- 3.7.3 A number of the sherds found reflected the every day pottery used; fragments of a brown glazed redware *pancheon* and a yellow glazed *pancheon*, probably from Silverdale, are examples of this. Two fragments of manganese mottled ware of seventeenth or eighteenth century date, probably a pot or bowl, similarly are of a country pottery type and reflect the influence of Staffordshire Wares. A small fragment of Mocha ware dating to the nineteenth century is similarly an example of every day pottery (Coutts 2001).
- 3.7.4 Two fragments of North Yorkshire slipware represent local pottery; one is lead glazed and slip trailed, and dates to the seventeenth or eighteenth centuries. The second fragment a more typical slip trailed redware dating to the late nineteenth century. Both fragments of pottery may be from Burton, although other manufacture sites include Halifax and Wrenthorpe.
- 3.7.5 Finer wares include a small sherd of a Staffordshire or Staffordshire reversed-trailed slipware cup, and a base sherd of a delicate white salt-glazed stoneware cup. A small fragment of tin-glazed earthenware is intriguing and most likely from Liverpool. A fragment of brown-glazed stoneware of Rhenish type is intriguing, and may be English stoneware (c1690-1775), however, it may also be a German copy attributed to John Dwight (Coutts 2001).
- 3.7.6 **Clay Pipe:** four fragments of clay pipe were recovered, two stems and two bowls, one of which was decorated. All date from the seventeenth to nineteenth centuries.
- 3.7.7 **Glass:** two small shards of glass were recovered, one bearing a number. The shards are part of either a water or perhaps milk bottle and belong to the nineteenth to early twentieth centuries.

4. DISCUSSION

4.1 SYNTHESIS

- 4.1.1 Historically, the area around Sedbergh has had a pastoral landscape and economy. From the prehistoric period to the post-medieval, farming has been the main employment, with evidence of Iron Age field systems to the south of the pipeline, and medieval pastoral land use on Holme Fell (*Sections 1.3.2 and 1.3.4*). During the eighteenth and nineteenth centuries there was the development of industrial activity in the area, with cotton manufacturing becoming an increasingly important employer, and the establishment of quarries. Farming, however, was still the mainstay of the local economy.
- 4.1.2 Although there was a paucity of archaeological remains identified during the archaeological programme of works, those that were observed presented an example of landscape use and economy of the local area. The ridge and furrow (Sites **06** and **08**, Plate 4); the field boundaries, including the drystone walls (Site **13**, Plate 5); the sheep smoots (Sites **07** and **09**); water troughs (Sites **14** and **16**), and the small quarries (Sites **10-12**, the stone of which was probably used in the surrounding walls, Plate 6), suggests that the area of and around the pipeline easement was used exclusively for mixed pastoral and arable farming (Fig 3), with an emphasis on the former. This has probably been the main land use for 1000s of years, and still continues to the present day. The pottery sherds recovered during the evaluation trenches and topsoil strip watching brief, all date to the post-medieval, and probably represents the manuring of ridge and furrow (the majority of the fragments were discovered unstratified within the topsoil of Fields 1-3 and 5). The pottery probably came from Sedbergh to the east, and the small hamlet of Brigflatts to the west. The presence of 'notable' pottery observed in the finds results (*Section 3.6*), most likely comes from Sedbergh, as it was, and still is, an affluent town.
- 4.1.3 The weir and building identified during the walkover survey probably relate to activities further upstream, such as Birks Cotton Mill, or the Brigflatts Ford, identified on the Ordnance Survey first edition (1852).
- 4.1.4 In conclusion, the evidence gathered along the proposed pipeline route is very much in keeping with the historical, and current, culture and economy of the local and probably regional area. Nothing of any real archaeological significance will be impacted upon by the pipeline.

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6. ILLUSTRATIONS

6.1 LIST OF FIGURES

Figure 1: Site Location

Figure 2: Location of test pits and boreholes observed during the watching brief

Figure 3: Walkover survey

Figure 4: Topographic detail of Sites **6**, **10** and **13**

Figure 5: Evaluation trench location plan, showing watching brief field numbers

6.2 LIST OF PLATES

Plate 1: Test pit 1 looking north-west

Plate 2: Test pit 2 looking east

Plate 3: Test pit 6 looking north

Plate 4: Field boundary and ridge and furrow cultivation (Site **06**), looking south

Plate 5: Stone-faced boundary wall (Site **13**), looking north-east

Plate 6: Quarry scoop (Site **10**), looking north-west

Plate 7: Sheep smoot looking north-east

Plate 8: Rawthey Railway Bridge (Site **02**), looking south

Plate 9: Low Brigflatts Farm looking south-west

Plate 10: Trench 2 looking east

Plate 11: Trench 5 looking west

Plate 12: Trench 7 looking west

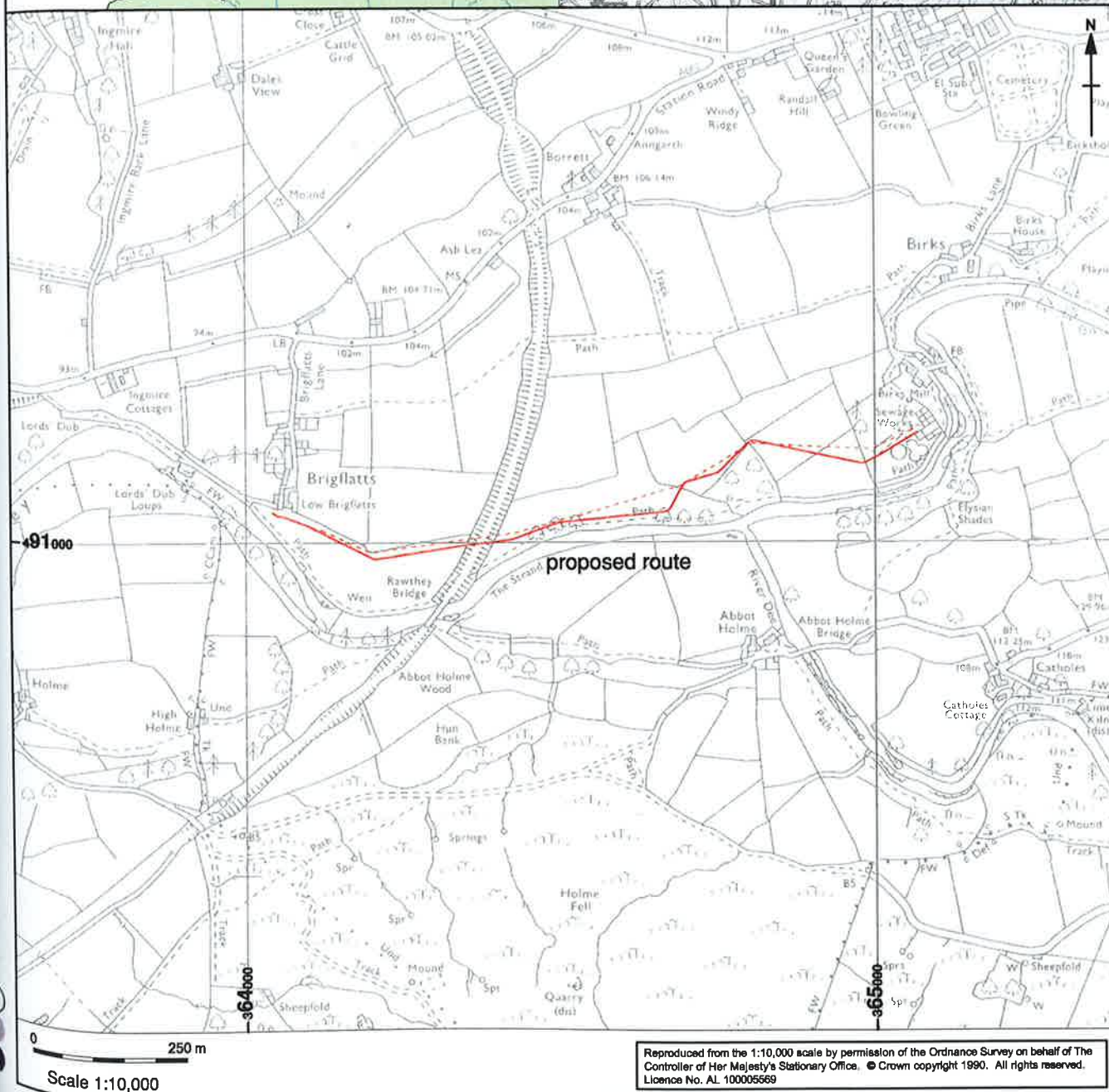
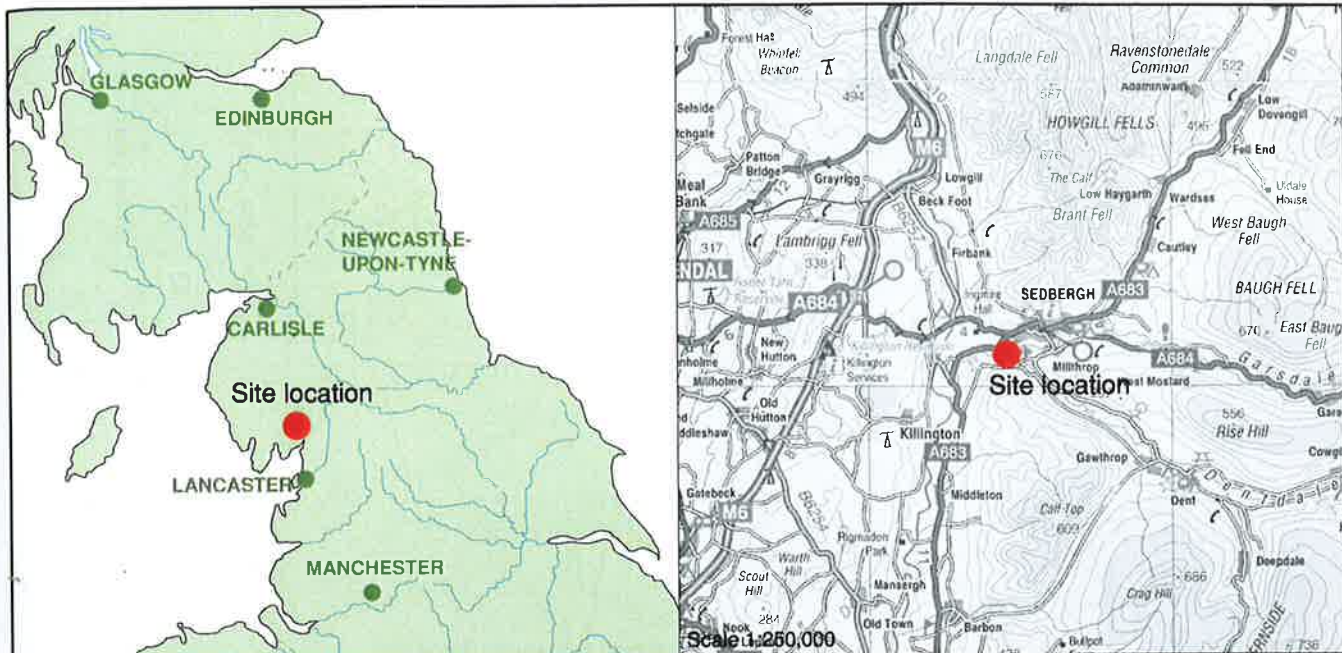


Figure 1: Site Location

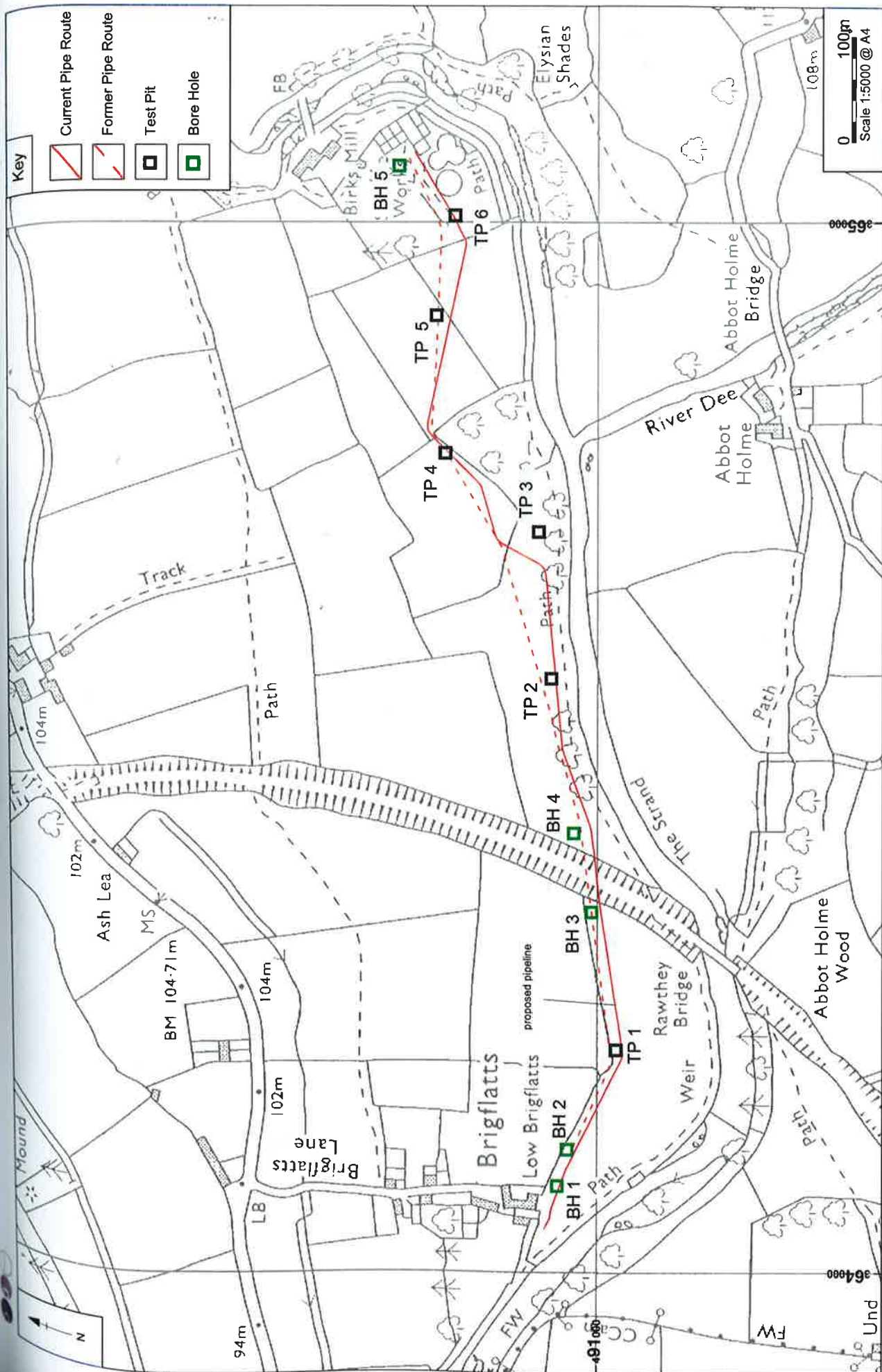


Figure 2: Test pits and bore holes observed during watching brief

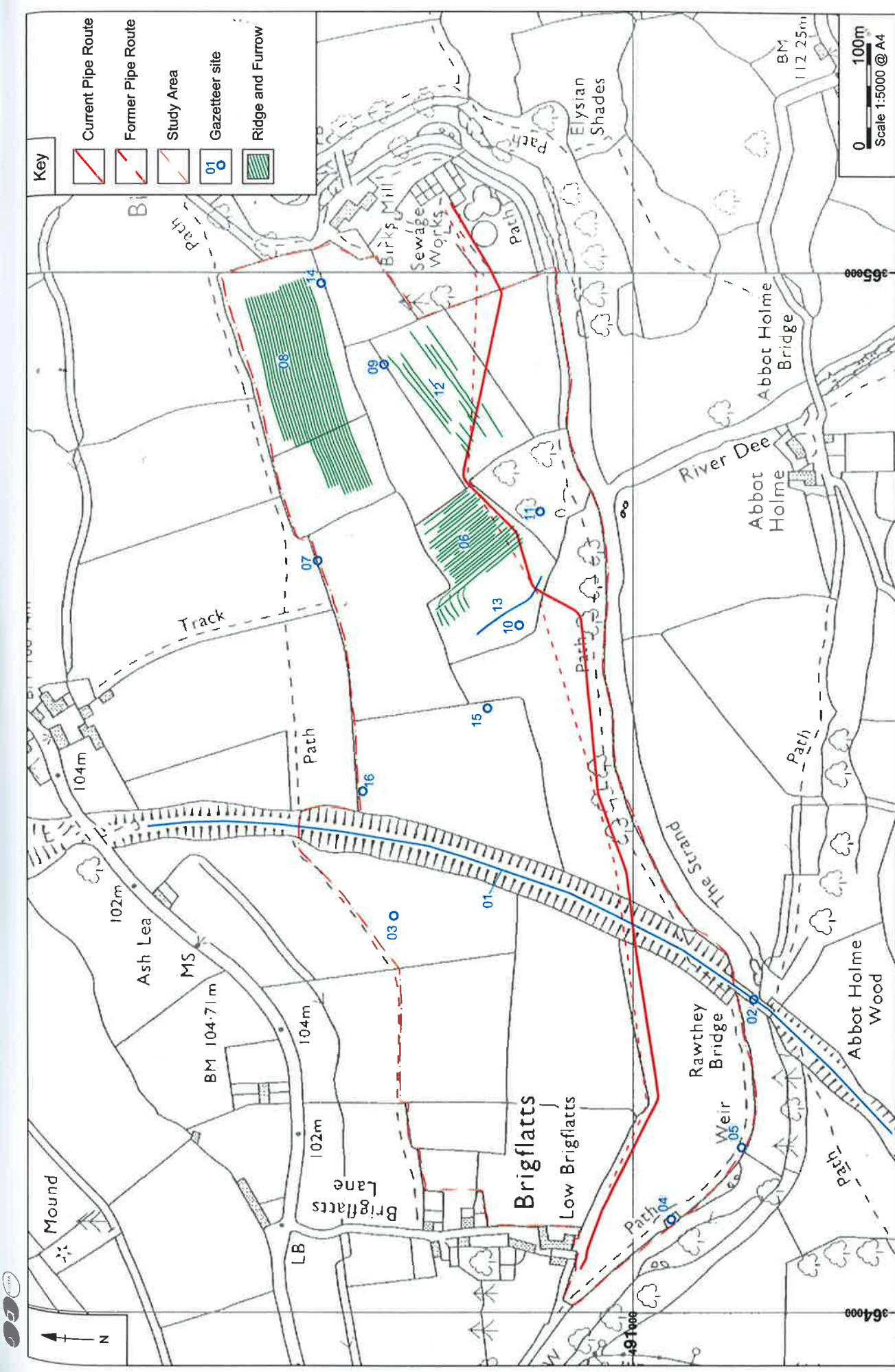


Figure 3: Walkover survey

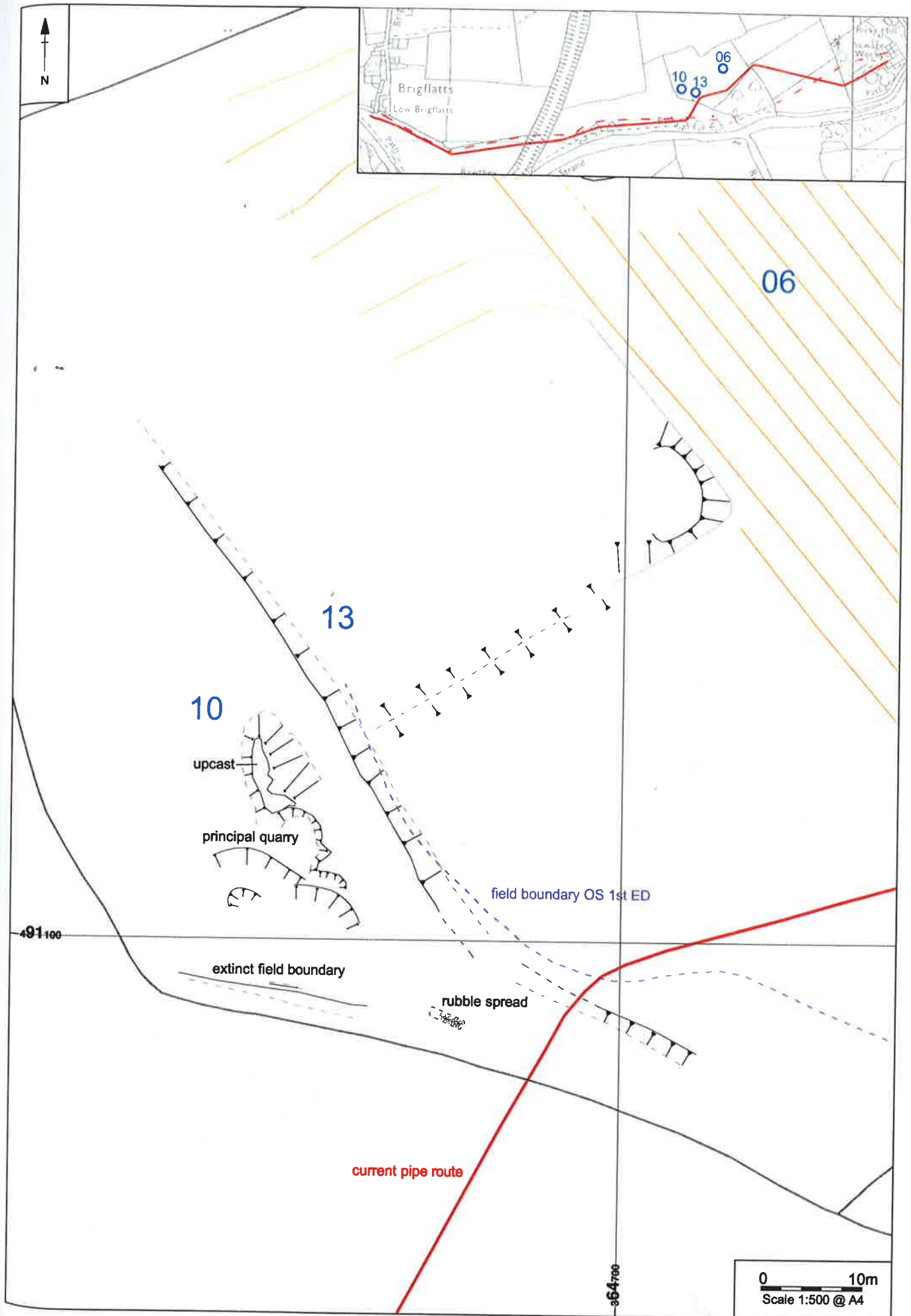


Figure 4: Topographic detail of Sites 6, 10 and 13

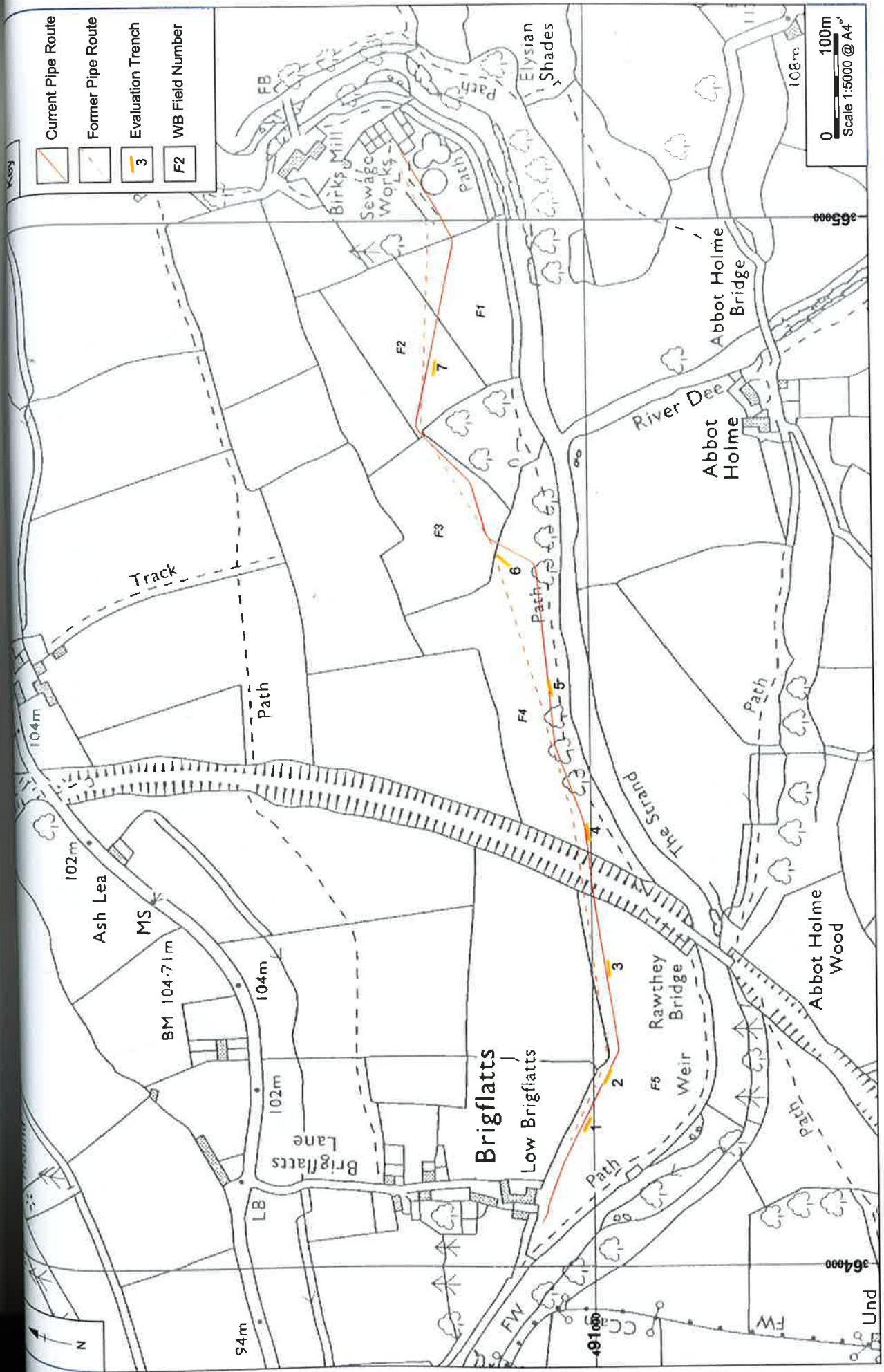


Figure 5: Evaluation trench location plan. showing watching brief field numbers



Plate 1: Test Pit 1 looking north-west



Plate 2: Pest Pit 2 looking east



Plate 3: Test Pit 6 looking north



Plate 4: Field boundary and ridge and furrow cultivation, looking south



Plate 5: Stone-faced boundary (Site 13), looking north-east



Plate 6: Quarry scoops (Site 10), looking north-west



Plate 7: Sheet smoot looking north-east



Plate 8: Rawthey Railway Bridge (Site 02), looking south



Plate 9: Low Brigflatts Farm looking south-west



Plate 10: Trench 2 looking east



Plate 11: Trench 5 looking west



Plate 12: Trench 7 looking west

APPENDIX 1: PROJECT DESIGN

**Oxford
Archaeology
North**

October 2004

BRIGGFLATS, SEDBERGH, NORTH YORKSHIRE

**ARCHAEOLOGICAL WALKOVER SURVEY AND EVALUATION
PROJECT DESIGN**

*Prepared for:
United Utilities*

1. INTRODUCTION

- 1.1 United Utilities (hereafter the 'client') propose to improve the treatment of wastewater at Briggflats, near Sedbergh, North Yorkshire. The proposals include the transfer of flow to another wastewater treatment works to the east of the Briggflats treatment works.
- 1.2 The area of the proposed improvement works lies with the North Yorkshire extent of the Yorkshire Dales National Park, and as a result the YDNPA Conservation Archaeologist specified that a desk-based assessment (OA North 2004) be undertaken prior to the improvement works being undertaken. The results of the desk-based assessment highlighted the close proximity of the Holme Fell earthworks, which are thought to date to the prehistoric period and are of regional importance. Following this evidence a further programme of archaeological work has been requested. This includes both a walkover survey and evaluation trenching.
- 1.3 Oxford Archaeology North (OA North) has considerable experience of the assessment, evaluation and excavation of sites of all periods, having undertaken a great number of small and large-scale projects during the past 20 years. Watching briefs, evaluations and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables
- 1.4 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 to evaluate the archaeological resource, which will be affected by the proposed development of the site. The required stages to achieve these ends are as follows:
- 2.2 **Walkover Survey:** this will be undertaken for the purposes of identifying the presence of archaeological remains in the field.
- 2.3 **Evaluation:** to implement a programme of trial trenching examining approximately 5% of the line of the pipe trench within the pipeline easement.
- 2.4 **Report and Archive:** production of a report following the collation of data during section 2.2 and 2.3 above.

METHOD STATEMENT

WALKOVER SURVEY

- 3.1.1 A level I walkover survey (*Appendix 1*) will be undertaken to relate the existing landscape to research findings. This will encompass a one hundred metre corridor along either side of the pipeline, walked in a systematic fashion. Archaeological features identified within the landscape will be recorded using the relevant OA North pro forma, and the features accurately positioned with the use of either a GPS, which can achieve accuracies of $\pm 0.1\text{m}$ with respect to the OS national grid, or by manual survey techniques which will tie in new features to features already shown on the relevant OS map.
- 3.1.2 The walkover survey should take place prior to the programme of trial trenching and any development related ground disturbance.
- 3.1.3 The identification of any archaeological earthwork remains will necessitate the undertaking of a topographic survey of any such sites identified. Discussions will take place with the YDNPA Archaeologist, as to the extent of further works to be carried out. All further works would be subject to a variation to this project design.
- ### 3.2 EVALUATION
- 3.2.1 The programme of evaluation will require trenching to establish the presence or absence of any previously unsuspected archaeological deposits and, if established, will then test their date, nature, depth and quality of preservation. In this way, it will adequately sample the threatened available area. The evaluation should be undertaken prior to any topsoil stripping activities and following the pegging-out or fencing-off of the easement.
- 3.2.2 The evaluation is required to evaluate a minimum of 5% of the line of the pipe trench within the pipeline easement. This will take the form of eight linear trenches 15m x 1.6m or the equivalent, dependent upon the topographical conditions.
- 3.2.3 The topsoil will be removed by machine (fitted with a toothless ditching bucket, approximately 1.6m in width) under archaeological supervision to the surface of the first significant archaeological deposit. This deposit will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features. All features of archaeological interest must be investigated and recorded unless otherwise agreed by the YDNPA Archaeologist. The trenches will not be excavated deeper than 1.20m to accommodate health and safety constraints; any requirements to excavate below this depth will involve recosting.
- 3.2.4 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Any investigation of intact archaeological deposits will be exclusively manual. A minimum sample of 50% of archaeological features must be examined by excavation. Selected pits and postholes will normally only be half-sectioned, linear features will be subject to no less than a 25%

sample, and extensive layers will, where possible, be sampled by partial rather than complete removal. It is hoped that in terms of the vertical stratigraphy, maximum information retrieval will be achieved through the examination of sections of cut features. All excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features, which appear worthy of preservation *in situ*.

- 3.2.5 **Environmental Sampling:** environmental samples (bulk samples of 30 litres volume, to be sub-sampled at a later stage) will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches). Subject to the results of the evaluation an assessment of any environmental samples will be undertaken by the in-house palaeoecological specialist, who will examine the potential for further analysis. The assessment would examine the potential for macrofossil, arthropod, palynological and general biological analysis. The costs for the palaeoecological assessment are defined as a contingency and will only be called into effect if good waterlogged deposits are identified, and will be subject to the agreement of the YDNPA Archaeologist, and the Client.
- 3.2.6 Samples will also be collected for technological, pedological and chronological analysis as appropriate. If necessary, access to conservation advice and facilities can be made available. OA North maintains close relationships with Ancient Monuments Laboratory staff at the Universities of Durham and York and, in addition, employs artefact and palaeozoological specialists with considerable expertise in the investigation, excavation and finds management of sites of all periods and types, who are readily available for consultation.
- 3.2.7 **Human Remains:** any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. The YDNPA Archaeologist and the local Coroner will be informed immediately. If removal is essential the exhumation of any funerary remains will require the provision of a Home Office license, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations, and if appropriate, in compliance with the 'Disused Burial Grounds (Amendment) Act, 1981.
- 3.2.8 **Recording:** all information identified in the course of the site works will be recorded stratigraphically, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.
- 3.2.9 Results of the field investigation will be recorded using a paper system, adapted from that used by Centre for Archaeology of English Heritage. The archive will include both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:50, 1:20, and 1:10). Levels will be tied into the Ordnance Datum. All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard

practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.

- 3.2.10 **Treatment of finds:** all finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines.
- 3.2.11 **Treasure:** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.
- 3.2.12 All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator.
- 3.2.13 **Contingency plan:** in the event of significant archaeological features being encountered during the evaluation, discussions will take place with the YDNPA Archaeologist, as to the extent of further works to be carried out, and in agreement with the Client. All further works would be subject to a variation to this project design. In addition, a contingency costing may also be employed for unseen delays caused by prolonged periods of bad weather, vandalism, discovery of unforeseen complex deposits and/or artefacts which require specialist removal, use of shoring to excavate important features close to the excavation sections etc. This has been included in the costing and would be in agreement with the client.

3.3 REPORT/ARCHIVE

- 3.3.1 **Report:** two copies of a written synthetic report will be submitted to the Client, and two copies to the YDNPA. The final report will include:
- 1 a concise, non-technical summary of the project results;
 - 2 an introduction to the circumstances of the project and the aims and objectives of the study;
 - 3 a summary of the methodology and an indication of any departure from the agreed project design;
 - 4 a copy of the agreed project design;
 - 5 an outline of past and present land-use;
 - 6 a summary of the archaeological/historical background;
 - 7 the results of the walkover survey including a gazetteer of sites;
 - 8 a detailed description of the results of the trial trenching;
 - 9 an interpretation and discussion of the results of the fieldwork including an assessment of the likely impact of the proposed development;
 - 10 appropriate figures and plates;
 - 11 a full list of references to and bibliography of primary and secondary sources consulted and a list of any further sources identified but not consulted;
 - 12 an index of the project archive.

- 3.3.2 The report will be in the same basic format as this project design; a copy of the report will be provided on CDROM.
- 3.3.3 **Collation of data:** the data generated by 3.1 will be collated and analysed in order to provide an assessment of the nature and significance of the known surface and subsurface remains within the designated area. It will also serve as a guide to the archaeological potential of the area to be investigated, and the basis for the formulation of any detailed field programme and associated sampling strategy, should these be required in the future.
- 3.3.4 **Proposals:** recommendations for any further evaluation of the identified archaeological resource will, if required, be presented in the report.
- 3.3.5 **Archive:** the results of Stage 3.1 to 3.2 will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct.
- 3.3.6 This archive can be provided in the English Heritage Centre for Archaeology Service format, both as a printed document and on computer disks as ASCII files (as appropriate), and a synthesis (in the form of the index to the archive and the report) will be deposited with the YDNPA the original record archive of projects (paper, magnetic, and plastic media) with the appropriate County Record Office, and, where appropriate the material archive (artefacts, ecofacts, and samples) with the County Museums Service.
- 3.3.7 The Arts and Humanities Data Service (AHDS) online database *Online Access to index of Archaeological Investigations* (OASIS) will be completed as part of the archiving phase of the project.
- 3.3.8 **Confidentiality:** the assessment report is designed as a document for the specific use of the client, for the particular purpose as defined in the project brief and this project design, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose, can be fulfilled, but will require separate discussion and funding.
- 3.3.9 **Publication:** a summary report will be submitted to a suitable regional or national archaeological journal within twelve months of completion of the fieldwork.

4 PROJECT MONITORING

- 4.1 Monitoring of this project will be undertaken through the auspices of the YDNPA Conservation Archaeologist, who will be informed of the start and end dates of the work.

5 WORK TIMETABLE

- 5.1 OA North could commence the fieldwork within two weeks of receipt of written notification from the client.
- 5.2 The walkover survey is expected to take in the region of one day to complete and the evaluation in the region of four days.
- 5.3 The client report will be completed within eight weeks following completion of the fieldwork, although a shorter deadline can be negotiated.

6 STAFFING

- 6.1 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.
- 6.2 The walkover survey and evaluation will be directed by an OA North supervisor. All OA North's project officers and supervisors are experienced field archaeologists who regularly undertaken supervision of numerous small- and large-scale evaluation and excavation projects.
- 6.3 The supervisor will be assisted by an archaeological assistant.
- 6.4 The processing and analysis of any palaeoenvironmental samples will be carried out under the auspices of **Elizabeth Huckerby BA, MSc** (OA North project officer), who has extensive experience of the palaeoecology of the North West, having been one of the principal palaeoenvironmentalists in the English Heritage-funded North West Wetlands Survey.
- 6.5 Assessment of any finds from the excavation will be undertaken by **Sean McPhillips BA**. Sean has worked as a finds supervisor for English Heritage and MOLAS on a number of occasions and has extensive knowledge concerning finds.

7 INSURANCE

- 7.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

APPENDIX 1: LEVEL 1 SURVEY

The survey outlined is based on survey levels defined by the Royal Commission on the Historical Monuments of England (RCHME) and are in accordance with stages of evaluation defined by the Association of County Archaeological Curators (ACAO 1993).

Level 1 Survey (Assessment)

This is a rapid level of survey (Site Inspection in project design) typically undertaken alongside a desk top study as part of the site assessment (ACAO 1993, 14). It is an initial site inspection, which helps the local planning authority to consider fully the archaeological implications of a planning proposal and also serves as the basis for undertaking and planning further archaeological work on the site.

The Level 1 survey represents the minimum standard of record and is appropriate to exploratory survey aimed at the discovery of previously unrecorded sites. Its aim is to record the existence, location and extent of an archaeological site. The emphasis for the recording is on the written description, which should record type and period and would not normally exceed *c.* 50 words.

The location and extent of the sites is typically shown on 1:2,500 or 1:10,000 OS maps as requested by the client. The extent of a site is only defined for sites greater than 50m in size and smaller sites are shown with a cross.

There are two alternative techniques (Levels 1a and 1b), which provide different accuracy levels and have different applications:

Level 1a

The sites are located by manual distance measurement techniques (eg pacing) with respect to field boundaries and provide an accuracy of ± 10 m (8 figure grid ref.). The loss of accuracy is offset by the slightly reduced costs; however, it is only appropriate for enclosed land, because of the paucity of usable topographic detail.

Level 1b

The sites are 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 ± 1 m. There is a slightly increased cost implication by comparison with Level 1a survey, but it can be undertaken in most terrains, even some woodland.

APPENDIX 2: GAZETTEER OF WALKOVER SURVEY SITES

Site number	01
Site name	London and North Western Railway (Ingleton Branch)
NGR	SD 6431 9101
Site type	Railway
Period	Post-medieval
SMR No	14646
Sources	SMR
Description	This site is a dismantled railway, with an embankment in the area of the proposed pipeline route.
Assessment	This site runs directly across the easement of the proposed route, although directional drilling is proposed underneath it and so it will not be affected by the development.
Site number	02
Site name	Rawthey Bridge, Sedbergh
NGR	SD 6428 9087
Site type	Railway Bridge
Period	Post-medieval
SMR No	17431
Sources	SMR
Description	Rawthey Bridge crosses the River Rawthey south-west of Sedbergh, shortly before it joins the River Lune.
Assessment	The site lies outside of the easement of the proposed route and is unlikely to be affected by it.
Site number	03
Site name	Ridge and Furrow, Brigflatts
NGR	SD 6438 9123
Site type	Ridge and Furrow
Period	Medieval/post-medieval
SMR No	N/A
Sources	Aerial Photo Ref 2927053, 1980, Walkover Survey
Description	An area, measuring 100m east/west by 150m north/south, that appears to contain broad ridge and furrow. No ridge and furrow was evident during the walkover survey.
Assessment	The site lies outside of the easement of the proposed route and is unlikely to be affected by it.
Site number	04
Site name	Ruined Structure, Brigflatts
NGR	SD 6408 9096
Site type	Structure
Period	Post-medieval
SMR No	N/A
Sources	Current OS mapping, Walkover Survey
Description	A small rectangular stone structure measuring 18m long by 4m wide. The walls are mortared and measure up to 1.5m in height. The structure is three celled and is mostly ruinous. There is a concrete floor tray and a sluice into the river, and there are internal brackets and a blocked aperture on the southern internal elevation. There are also iron railings to the south of the structure. It is not shown on the 1st edition OS mapping. It is probably related to water management/electricity generation associated with the weir upstream (Site 29).

Assessment The site lies outside of the easement of the proposed route and is unlikely to be affected by it.

Site number 05
Site name Weir, Brigflatts
NGR SD 6414 9087
Site type Weir
Period Post-medieval
SMR No N/A
Sources Current OS mapping, Walkover Survey
Description A stone-faced weir structure crossing the river downstream of Rawthey Bridge (Site 11). It is possibly associated with a ruinous structure downstream (Site 28). The weir survives intact across the river and has stone retaining walls with flat slab coping on the edges. There is a ruinous overflow channel located on the northern river bank.
Assessment The site lies outside of the easement of the proposed route and is unlikely to be affected by it.

Site number 06
Site name Ridge and Furrow I, Birks Mill
NGR SD 6471 9113
Site type Ridge and Furrow
Period Medieval/post-medieval
SMR No N/A
Sources Walkover Survey
Description A field containing a complex of features including two areas of ridge and furrow cultivation. The majority of the cultivation is narrow in nature and is in the east of the field. It is orientated north-west/south-east and runs up to a kink in the modern field boundary, which may show the limits of a historic boundary to the western edge of the cultivation. To the west of this cultivation is a shallow depression, which has a slight field bank running along it on the same orientation as the ridge and furrow. At the northern end of the bank is a flattened platform area. To the north-west of the modern field is an area of very slight but wide ridge and furrow cultivation. This is orientated south-west/north east and is very fragmentary.
Assessment The site lies within the easement of the proposed route and will be directly affected by it.

Site number 07
Site name Sheep Smoot I, Birks Mill
NGR SD 6473 9130
Site type Sheep Smoot
Period Post-medieval
SMR No N/A
Sources Walkover Survey
Description A small, blocked sheep smoot measuring up to 0.6m high by 0.4m wide.
Assessment The site lies outside of the easement of the proposed route and is unlikely to be affected by it.

Site number 08
Site name Ridge and Furrow II, Birks Mill
NGR SD 6487 9131
Site type Ridge and Furrow
Period Post-medieval
SMR No N/A
Sources Walkover Survey

Description	An area of narrow ridge and furrow located across the entirety of a modern field and beneath a modern sub-dividing field wall. It is orientated west-south-west/east-north-east and is all narrow in nature. There is an earthen lynchet which dissects the centre of the field from west to east and relates to a boundary shown extant on the OS 1st edition mapping. The ridge and furrow is more ephemeral on the north side of the lynchet.
Assessment	The site lies outside of the easement of the proposed route and is unlikely to be affected by it.
Site number	09
Site name	Water Trough, Birks Mill
NGR	SD 6491 9124
Site type	Trough
Period	Post-medieval
SMR No	N/A
Sources	Walkover Survey
Description	A small iron bathtub water trough enclosed in a smoot and straddling a boundary wall. The smoot measures 0.4m high by 0.6m wide.
Assessment	The site lies outside of the easement of the proposed route and is unlikely to be affected by it.
Site number	10
Site name	Quarry Scoops I, Birks Mill
NGR	SD 6466 9111
Site type	Quarry
Period	Post-medieval
SMR No	N/A
Sources	Walkover Survey
Description	A series of slight quarry scoops located on a small knoll to the west of Birks Mill and within a field containing field boundaries and ridge and furrow (Site 12). The largest scoop is ovoid, and is located atop the knoll, and measures approximately 8m long by 6m wide and up to 0.3m deep.
Assessment	The site lies adjacent to the easement of the proposed route but is unlikely to be affected by it.
Site number	11
Site name	Quarry Scoops II, Birks Mill
NGR	SD 6477 9109
Site type	Quarry
Period	Post-medieval
SMR No	N/A
Sources	Walkover Survey
Description	A series of at least eight small quarry scoops or tree-throws located within an area of woodland to the west of Birks Mill and clustered around a rocky knoll. Each measured up to 5m in diameter by up to 0.5m in depth, and have some upcast stone downslope of them. They are all sub-rectangular or sub-circular in plan.
Assessment	The site lies outside of the easement of the proposed route and is unlikely to be affected by it.
Site number	12
Site name	Ridge and Furrow III, Birks Mill
NGR	SD 6488 9116
Site type	Ridge and Furrow
Period	Post-medieval
SMR No	N/A
Sources	Walkover Survey

Description An area of extremely ephemeral narrow ridge and furrow. It is located within an extant field on the west side of Birks Mill and is orientated roughly south-west/north-east.

Assessment The site lies within the easement of the proposed route and will be directly affected by it.

Site number 13'
Site name Boundary Bank, Birks Mill
NGR SD 6500 9108 - SD 6495 9120
Site type Boundary Bank
Period Post-medieval
SMR No N/A
Sources Walkover Survey
Description A stone-faced earthen banked field boundary, surviving on the western side of Birks Mill. It measures up to 2m wide by 0.6m in height, and has a grown-out hedge of large trees on top of it, with areas of plashing. It runs in a north-west/south-east orientation and possibly forms the outer limit of the landholding around Birks Mill.

Assessment The site lies within the easement of the proposed route and will be directly affected by it.

Site number 14
Site name Sheep Smoot II, Birks Mill
NGR SD 6499 9130
Site type Sheep Smoot
Period Post-medieval
SMR No N/A
Sources Walkover Survey
Description A small, blocked sheep smoot measuring up to 0.7m high by 0.5m wide.

Assessment The site lies outside of the easement of the proposed route and is unlikely to be affected by it.

Site number 15
Site name Sheep Smoot III, Birks Mill
NGR SD 6458 9114
Site type Sheep Smoot
Period Post-medieval
SMR No N/A
Sources Walkover Survey
Description A small, blocked sheep smoot measuring up to 0.6m high by 0.4m wide.

Assessment The site lies outside of the easement of the proposed route and is unlikely to be affected by it.

Site number 16
Site name Sheep Smoot IV, Birks Mill
NGR SD 6450 9126
Site type Sheep Smoot
Period Post-medieval
SMR No N/A
Sources Walkover Survey
Description A small, blocked sheep smoot measuring up to 0.6m high by 0.4m wide.

Assessment The site lies outside of the easement of the proposed route and is unlikely to be affected by it.

APPENDIX 3: CONTEXT LIST

3.1 CONTEXT LIST: TEST PITS

Context No	Description
100	Topsoil
101	Subsoil
102	Natural
103	Clay sealing layer
104	Post-medieval refuse tip

3.2 CONTEXT LIST: EVALUATION TRENCHES

Context No	Trench No	Depths	Description
100	1	0.15	Topsoil
101	1	0.4m	Subsoil
200	2	0.15m	Topsoil
201	2	0.4m	Subsoil
300	3	0.15m	Topsoil
301	3	0.3m	Subsoil
400	4	0.1m	Topsoil
401	4	0.3m	Subsoil
500	5	0.3m	Topsoil
501	5	0.4m	Subsoil
600	6	0.15m	Topsoil
601	6	0.3m	Subsoil
700	7	0.2m	Topsoil
701	7	0.3m	Subsoil
800	8	0.15m	Topsoil

801	8	0.4m	Subsoil
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3.3 CONTEXT LIST: TOPSOIL STRIP WATCHING BRIEF

Context No	Field No	Depths	Description
100	1-5	Av 0.2m	Topsoil
101	1-5	N/A	Subsoil
102	3	N/A	Stone field boundary
103	4	0.13m	Cut for modern fire pit
104	4	0.03m	Cut for modern fire pit
105	4	0.01m	Fill of 103
106	4	0.02m	Fill of 103
107	4	0.02m	Fill of 103
108	4	0.02m	Fill of 103
109	4	0.05m	Fill of 103
110	4	0.1m	Fill of 103
111	4	0.03m	Fill of 104
112	4	N/A	Fill of 104
113	5	0.2m	Topsoil to west of field
114	5	N/A	Subsoil to west of field