HAYESWATER PIPELINE

Cumbria

Archaeological Appraisal Report
Second Revision

Oxford Archaeology North

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The desk-based study and report were undertaken by Vix Hughes and the drawings were by Emma Carter. The report was edited by Jamie Quartermaine and the overall project management was by Jamie Quartermaine.

SUMMARY

Oxford Archaeology North (OA North) has been requested by United Utilities to examine the archaeological implications of the construction of two sections of a proposed pipeline route in central Cumbria. One section extends through the areas around Pooley Bridge, Askham, Helton, Bampton and Shap (NY 4781 2492 - 5615 1256). The other section runs through Raisbeck, Asby, Crosby Garrett and Warcop (NY 6437 0758 - 7317 1948) and touches the parishes of Soulby and Ormside. Both areas contain extensive landscapes containing a rich range of archaeological monuments extending from the Neolithic period through to the present. Some of the sites are Scheduled Monuments, deemed to be of national importance, and as such are protected from any disturbance. The original appraisal was undertaken in November 2002 and this report is an updated second version with additional sites 81-91, which reflect re-routed sections. The main body of the report remains the same as do many of the impacts and recommendations. Where appropriate text concerning the now redundant sections has been removed, therefore this version and the original are both valid and show alterations as a result of informed discussions.

The requirement of the study was for a rapid appraisal of the route rather than an in-depth assessment; consequently the sources investigated were restricted to the Sites and Monuments Record (SMR) and the OS First Edition maps, and only summary descriptions of the archaeological resource were compiled. Where possible, quantitative methods have been utilised in order to produce a more informative picture of the resource and the impact of the proposals upon it, and thereby provide a basis for recommendations to protect the resource, or provide appropriate mitigative measures.

From the SMR, 91 sites were identified as being within a 200m corridor of the pipeline, of which 74 are pertinent for this revised version, 100m to either side of the alignment. Of the 78 SMR entries, eight were identified as Hazard Areas, nine sites were part of Scheduled Monuments and one was a Listed Building.

The most significant site that will potentially be impacted upon is the area around Shap Abbey which is of considerable importance. It is also presently proposed that the pipeline should cross the line of two Roman roads; at Celleron, and near Sandford. The greatest impact on medieval material is to the earthwork remains on the outskirts of villages that have shrunken since this time. A number of industrial monuments date from the post-medieval period; notably lime kilns, lie within the easement corridor of the proposed pipeline.

The sites have been scored on the basis of their archaeological significance, their rarity, their archaeological status, their condition, their period, and their proximity to the proposed pipeline; in broad terms this means that sites with a high score should warrant the rerouting of the pipeline, whereas sites with a low score should require little or no further action. For instance, the site with the highest score is a standing stone of the Shap alignment, and the lowest score is that for a post-medieval reservoir, remote from the pipeline.

The recommendations are presented in tabular form. These seek to preserve *in situ* the resource where possible, hence the more important sites should be protected by rerouting the pipeline, and small, localised sites should also be avoided / protected within the easement corridor. If it is not possible to avoid the sites then options for evaluation as a preliminary to further recording, as mitigation, are presented. Some of the lesser sites can be recorded by means of a watching brief during the construction process. Finally, for sites

of lesser significance and remote from the pipeline, it is recommended that there should be no further archaeological action.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 Oxford Archaeology North (OA North) has been requested by United Utilities to examine the archaeological implications of the construction of two sections of a proposed pipeline route in central Cumbria (Fig 1). One extends through the areas around Pooley Bridge, Helton, Celleron, Bampton and Shap (NY 4781 2492 - 5615 1256). The other section runs through Raisbeck, Asby, Crosby Garrett and Warcop (NY 6437 0758 - 7317 1948) and touches the parishes of Soulby and Ormside. Both areas contain extensive landscapes containing a rich range of archaeological monuments extending from the Neolithic period through to the present. The construction of the pipeline would have a considerable impact on these landscapes of known and potential archaeological sites. Some of the sites are Scheduled Monuments, deemed to be of national importance, and as such are protected from any disturbance. This report is an updated, second version of the original appraisal, undertaken in November 2002, and examines the same sources of evidence for several re-routed sections.

1.1.2 ***Rapid Appraisal:*** United Utilities has requested at this stage a statement outlining the archaeological potential and impact of the proposed routes, rather than a detailed archaeological assessment. Consequently, only a basic level of documentary work has been undertaken, and only summary descriptions of the archaeological resource are present in this preliminary study. Where possible, quantitative methods have been utilised, in order to produce a more informative picture of the resource and impacts upon it. The Impact Section (*Section 5*) examines the specific impact of the route on each of the known archaeological resource and the Recommendations Section (*Section 6*) suggests mitigation measures, including rerouting, to protect the archaeological resource. As a result of earlier discussions the original proposed route across Askham Fell (OA North 2002) has been abandoned in favour of a more northerly route which avoids the known archaeological landscapes. The original data is still incorporated into the tables but has not been included in the text.

1.1.3 All of the information concerning archaeological sites within the assessed areas has been collated into a gazetteer (*Appendix 2*), which provides details of their location, period, and character. Locations are given as eight-figure National Grid References where possible; a summary description of each site is also provided and the sites have been marked on digital maps (Figs 6 -10). Other sites beyond the extent of the study area, which were considered to be of background relevance, are mentioned in the text with appropriate SMR references, but are not depicted on the mapping or included in the site gazetteer.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design (*Appendix 1*) was submitted by OA North to United Utilities for an archaeological appraisal for two sections of the Hayeswater pipeline, examining a corridor of 200m width centred on the proposed route:

- Section 1:Raisbeck to Bankwood (NY 699 098 - NY 731 194) *c*14km
- Section 2: Pooley Bridge to Shap (NY 471 220 - NY 561 126) *c*21.5km

2.1.2 The project design was produced in accord with a verbal brief from Richard Newman, Cumbria County Archaeologist. 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 RAPID APPRAISAL

2.2.1 Within the Rapid Appraisal three main sources were consulted: the County Sites and Monuments Record (SMR); the OS First Edition maps for the route; and the aerial photograph collections held at the SMR. These sources were sufficient to identify the principal archaeological monuments along the alignment of the proposed pipeline, but will not have identified all the archaeological resource. A more intensive documentary assessment would be necessary to provide a comprehensive examination of documentary and cartographic sources, as well as antiquarian accounts and numerous other sources and published works necessary to provide a full picture of not only the known sites, but also the archaeological potential of the area. The Rapid Appraisal involved visits to the Cumbria Sites and Monuments Record and the Cumbria Record Office (Kendal).

2.2.2 ***Cumbria Sites and Monuments Record (SMR):*** a detailed digital record of all sites noted on the Sites and Monuments from along the line of the proposed route was obtained from the Cumbria SMR. The Lake District National Park Authority maintains its own SMR; however, this data is periodically backed up into the Cumbria SMR. Therefore, for the present appraisal, only the Cumbria SMR was consulted, which means that, for the Lake District section of the route, the data may be slightly out of date. In the present study there was no requirement for an in-depth examination of the photographic material lodged in the Cumbria SMR.

2.2.3 ***Aerial Photography:*** the aerial photographic collection at the SMR was consulted and photographs were selectively examined where they appeared to be able to enhance information about a specific site. In total, 45 photographs were examined, all black and white obliques with clear details. Other photographs covering the area, both oblique and vertical, may be held at the NMR (Swindon) and these may produce additional results.

2.2.4 ***Cumbria Record Office (Kendal):*** the First Edition OS maps were a published source of printed maps at a scale of 1:10,560, (Figs 2 - 5). They show clear details and are regarded as accurate in both location and the nature of the material they represent.

2.3 ANALYSIS

2.3.1 The impact of the proposed pipeline upon the archaeological resource was assessed using the guidelines set out in the appraisal document issued by the then Department of the Environment Transport and the Regions (DETR 1998) as a framework. Although this document relates to road schemes, it is a recognised, objective methodology compatible with Environmental Impact Assessments and the criteria involved in the Scheduling of monuments and sites. The qualitative information produced by the appraisal was dealt with by a system of scoring, which enabled tables of relative impact to be created, providing a quantitative approach to the appraisal. Thus a high score will denote a site of great importance that has a considerable likelihood of adverse impact by the pipeline, and a low score denotes a site of lower importance, normally remote from the pipeline and thus not directly impacted upon. The results are given in Tables 1 and 2 (*Section 5.1.3*). The Site Number refers to the site gazetteer (*Appendix 2*) and relates to Figures 6-10, while the SMR Number is the number of the record held at the Cumbria County Council SMR in Kendal. The columns for Period, Condition, Association and Rarity provide scores for each site, each section scoring from one to four, as follows:

Score	Period
1	Post-medieval
2	Medieval
3	Roman or unknown
4	Prehistoric or Early Medieval

Score	Condition
1	Non-existent, not seen in survey
2	Poor, very little survives
3	Good, over a third survives
4	Excellent, near complete

Score	Association
1	Single findspot
2	Single feature
3	Cluster of features = Site
4	Cluster of sites = Landscape

Score	Rarity
1	Very Common, 5000+ in England
2	Moderately Common, 1000-5000 in England
3	Rare, 100-1000 in England
4	Extremely Rare, <100 in England

2.3.2 In addition to these categories, the designated significance of a site was included; this includes designation as a Hazard Area, which has planning restrictions, or as a Scheduled Monument which provides legal protection; there was one Listed Buildings within the corridor which was also designated as significant. Such designated sites were given weighted scores: two points for a Hazard Area and five for a Scheduled Monument or Listed Building. The resulting overall scores, for individual sites, ranged from 6 to 25.

2.3.3 The major factor in determining the impact was the proximity of the monuments to the proposed line of the pipe. The impacts were defined as: Category 1: Certain and Direct, meaning that the monuments lie on the route of the pipeline itself or within the 15m easement, and for these the impact was gauged as scoring 4; Category 2:

Certain and Indirect, meaning that the sites lie beyond the 15m easement but within 100m of the route, for which the Impact was gauged as scoring 2.

2.3.4 Other sites on the fringes of the scheme may also be liable to be affected by the development, as they lie within the immediate vicinity, but the impact upon these is dependent on the access points to be used. In these instances it is assumed that due care and attention will be paid to any archaeology which may be encountered.

2.4 ARCHIVE

2.4.1 The results of the rapid appraisal will become part of a full archive compiled at the completion of the project. The archive will be assembled to professional standards, in accordance with current English Heritage guidelines (1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project, and a synthesis (in the form of the index to the archive and the report) will be deposited with the National Monuments Record (RCHM(E)), as appropriate. OA North practice is to deposit the original record archive of projects (paper, magnetic, and plastic media) with the Cumbria Record Office (Kendal).

3. RESULTS

3.1 SITES AND MONUMENTS RECORD (SMR)

3.1.1 The majority of the sites within the site gazetteer (Appendix 2) (91 Sites) were from the SMR, which were compiled as a result of a search on a 200m corridor centred on the alignment of the proposed pipeline. The gazetteer has been retained in its complete form and the numbering has remained sequential. The sites retrieved from the SMR are specific to the alignment and if this alignment is altered this will have further implications, since the areas around the corridor contained numerous other sites, which were not within the catchment of this project. Of the 74 SMR entries pertinent to this updated revision, eight were identified as Hazard Areas (Sites 7, 8, 26, 36, 44, 45, 46 and 90), two sites were part of Scheduled Monuments (Sites 3 and 35) and one was a Listed Building (Site 81), (Figs 6-10).

3.1.2 Broadly, the sites fall into the following primary site types, described in the order of their frequency within the study corridor:

Site Type	Number of Sites	Site Numbers
Lime Kiln	16	11-14, 48-50, 53-56, 68-70, 72, 83 and 85
Quarries	12	10, 16-17, 51-52, 57-59, 63, 66-67 and 84
Medieval Villages	9	7, 8, 26, 36, 42, 44-46 and 90
Standing Stones	9	1, 29-34 and 78
Fording points	4	6, 23, 61 and 64
Field Systems	5	24, 37, 73, 75 and 82
Cairns	4	27, 28, 74 and 77
Smithies	3	60, 62 and 7
Findspots	3	2, 5 and 38
Settlements	2	18 and 19
Farms	2	22 and 43
Post-medieval farms	2	9 and 15
Ridge and furrow	2	20 and 76
Earthwork sites	2	21 and 25
Roman roads	2	3 and 35
Medieval crosses	2	39, 41 and 79
Reservoir	1	65
Trackway	1	71
Medieval leper hospital	1	47
Roman camp	1	4
Neolithic burial site ?	1	4
Early medieval tumulus	1	40
Religious Site	1	81
Railway	1	80
Stone	1	91

3.1.3 In terms of period, there were 14 prehistoric sites, of which eight were Neolithic, two Bronze Age and four unspecified. There were also seven Roman sites, one early medieval, 14 medieval, 35 post-medieval, and 16 of unknown date.

3.1.4 The aerial photographs examined did not reveal any further sites other than those already included within the SMR.

3.2 ORDNANCE SURVEY (OS) MAPS

3.2.1 Several sites of potential interest were identified on OS maps that were not included on the SMR. All of these sites were in existence when the areas were surveyed in 1858 and for the most part were then in current use (OS First Edition 1867). These sites are not individually numbered, however, and are not in the gazetteer, since they have a low significance score and are all outside the proposed easement corridor, but are shown on the site mapping (Figs 6-10). These included 25 buildings and isolated dwellings, 11 wells, one bield (a shelter) and two sheepfolds.

3.2.2 Of the 25 buildings noted on the OS maps, all bar two still have structures on the same site today and therefore potentially contain elements or the entirety of the buildings depicted on the OS First Edition map. The two buildings, that are no longer extant are both in Section 1, at Sawbridge Cottage and at Storth. The latter was almost certainly removed in the twentieth century when the Ministry of Defence (MOD) acquired the surrounding land for the military training base of Warcop. Of the wells, two are shown on the modern OS maps, at Rosgill Head (NY 5429 1686) and Mark's Well in Helton (NY 5112 2208); the current status and existence of the remaining eight wells is unclear. The two sheepfolds to the east of Little Asby (NY 7121 0949, NY 7151 0994) are both still extant, but the current OS map does not mark the bield at Middle Busk (NY 6861 0924). The ford at Pipers Cross is still shown.

3.2.3 It is highly unlikely that the pipeline will directly affect any of these buildings but considering that many are isolated farmsteads, there may be possible remains of earlier activity in the immediate hinterland of the property, such as boundary plots, rubbish pits, outbuildings and agricultural or horticultural remains. Many of the wells are located within property plots on the outskirts of villages and those in current use will almost certainly be avoided. Potential problems may be encountered if the pipeline alignment crosses a disused well, which may not be apparent, however, at ground level.

4. ARCHAEOLOGICAL POTENTIAL

4.1 PREHISTORY

4.1.1 The marginal uplands and valleys of the Shap area have been occupied and exploited since at least the Neolithic period and potentially even earlier. The main Neolithic remains in the immediate vicinity of the study area are the surviving standing stones of the Shap Avenue (Sites 29-34 and 78), dated to the Late Neolithic period by analogy with more securely dated monuments (Clare 1978). The site is a Scheduled Monument and includes 14 individual stones in the Shap area, but there were certainly many more which have not survived, and the extant section extends over 3km (Burl 1993, 47). Antiquarian accounts (Nicholson and Burn 1777); George Hall 1824) clearly show that the stones were being broken up for use in buildings or to clear land for enclosure and agriculture in the late eighteenth and early nineteenth centuries. A survey of stones with similar geological sources and size, undertaken in 1972, indicates that others may survive but not *in situ* (Burl 1993). Thomas Routh, working in 1743 as William Stukeley's surveyor (responsible for planning and surveying Avebury and Stonehenge), commented that the Shap Avenue possibly turned just north of the Goggleby Stone, and that the avenue had an appearance of being a double row (Lukis 1894, 314). The antiquarian sources suggest that there may have been three avenues (double rows of stones) centred on the Shap area, one aligned north-west / south-east by Skellaw cairn, one north-west of Knipe Scar, and the third aligned north / south, south of Shap and aimed at Kemp Howe stone circle. It is also possible that the avenue north of Kemp Howe may instead have been two single rows (Burl 1993, 101). The conflicting interpretations are a direct result of an imperfect record resulting from interference and demolition of some of the sites. The proposed route originally passed along a linear area containing at least seven of the Shap Avenue Stones, the recent re-routing has meant that the route now passes away from the Avenue to the west, towards the land originally belonging to Shap Abbey.

4.1.2 As mentioned in the interim rapid assessment (OA North 2002) on the specific section crossing Askham Fell, there is also an avenue, orientated north-west / south-east, on Moor Divock, which links an alignment of large funerary monuments; while the extant section of stone avenue is relatively short, the alignment of funerary monuments extends over 2km (Quartermaine and Leech forthcoming). The alignments of the avenues at Shap and Moor Divock are very approximately orientated towards each other and it is possible that the two north-west / south-east alignments may have once been part of a more extensive landscape, either as an extended avenue of stones or as a former communication route marked by occasional monuments. If there were a contemporary association between the two avenues then the pipeline route will cross the projected alignment in the area north of Bampton, raising the possibility of extant sub-surface remains of prehistoric activity in this area. This premise is also suggested by antiquarian references to local knowledge suggesting that the stone alignment extended between Shap and Moor Divock (Simpson Feguson 1894).

4.1.3 The Iron Age is not represented in the study area, although multi-vallate hillforts are known from the surrounding region, at Castle Crags, on the north side of

Haweswater, Castlesteads in Lowther Park (LUAU 1997a) and Dunmallard Hill at the north end of Ullswater, north-west of Pooley Bridge, as well as two enclosed settlements in the northern part of the United Utilities Haweswater estate (LUAU 1997b).

4.2 ROMAN

4.2.1 High Street Roman road (Site 35) runs between Ambleside and Brougham (Margary 1973). A second road (Site 3) which underlies the modern A66 and ran from Carlisle to York, is also directly traversed by the pipeline alignment, north of Sandford (Margary 1973). These particular routes appear to have continued in use until the post-medieval period, and can be detected from the variety of finds found at well-established sites along the routes. Such communication routes have always been favoured for the development of sites, whether large and organised or smaller and informal, and of varying natures such as agricultural, commercial or residential. Therefore the hinterlands of both roads have the potential for Roman and later remains throughout their length.

4.3 EARLY MEDIEVAL

4.3.1 As is the case throughout Cumbria, evidence for early medieval activity is extremely limited, and there is often a reliance on place-name evidence to provide indicators of activity through this period. The only site identified as potentially having an early medieval origin is Benny Howe Barrow (Site 40), which was a large tumulus excavated in the 1830s containing six or seven skulls and some 'daggers'. Thc name 'Benny' is derived from a personal name of Scandinavian origin. However, it is not uncommon for prehistoric burial mounds to be reused in the early medieval period (O'Sullivan 1980) and the Scandinavian name does not therefore necessarily indicate that the mound is of Norse origin. The mound was ploughed out and no surface remains were identified within the SMR record (SMR 1536)

4.4 MEDIEVAL

4.4.1 This period is best represented by the villages of Helton, Askham, Low Knipe, Shap, Shap Abbey, Raisbeck and Sandford (Sites 46, 45, 44, 36, 90, 7, and 8 respectively) and the possible field system at Low Brow (Site 82). The pipeline alignment infringes on the Hazard Areas for these six villages. The layout of these villages are typical of medieval planned, nucleated settlements, and the settlement morphology and surviving earthworks of many villages within the Eden Valley catchment have thus been interpreted as representing evidence of medieval origins (CCAS nd). Many show a rectangular plan, sometimes around a green, but often apparently based around a narrow street (Roberts 1993, 131-3); the village fields were laid out at right angles to this street. The former extent of the village fields is often now reflected by a few narrow fields, which appear to represent the enclosure of groups of strips. Several of the settlements are characterised by areas, sometimes individual plots, in which there are earthwork remains of former buildings (CCAS nd, para 2.1). This has been interpreted as demonstrating that the villages were larger in the medieval period, or that the focus of settlement has shifted. It has been

argued that '*the quality and number of such remains is quite remarkable, and must be regarded as of national significance*' (*op cit*, para 2.2).

4.4.2 The foundation date for the villages remains problematic and speculative, and to some extent rests on the assumption that they must have been settled before the disasters of the fourteenth century, which included plague, diseases of livestock, and Scottish raids (Winchester 1987, 44-45). These villages, being planned nucleated settlements, have been tentatively dated to the early post-Conquest period, particularly from the twelfth century onwards in Cumbria (Roberts 1993). Although this rapid appraisal did not reveal any information about the founding of the villages, it established through references in medieval documents that there were settlements at these locations from at least the twelfth to thirteenth centuries (CCCAS nd). Research into the village plans has identified visible earthworks on either side of the main streets of each village. The existence of these earthworks indicates that the present villages have either shrunk from their former, larger extent or the focus of the settlement has moved (*ibid*), which accounts for the survival of the earthworks. Such earthworks are moderately extensive around the villages and can be seen clearly on aerial photographs and also at ground level.

4.4.3 Early cartographic sources and the fossilised field boundaries present in the landscape today reveal several narrow strip fields at right angles to the single axial village road running through the villages. There is a subsidiary lane lying parallel to the road at the rear of these strip fields which is termed a Back Lane, allowing access to the strips from this direction. In addition, there are several access lanes at right angles to the road which connect to the Back Lane. These provided additional access and have been termed toft and field 'vennels' (Roberts 1993, 141). The strips are regularly laid out in blocks which could relate to 'furlongs'.

4.4.4 ***Field Systems:*** there are many villages in the Eden Valley which have the fossilised remains of a former 'open-field' system (Butlin 1993, 173) around them; this consisted of large open arable fields in varying combinations of three or four, which were communally managed and rotated in terms of produce grown, grazing use or lying fallow. Such areas using this farming practice were usually larger areas of fertile, arable land in lowland regions. The characteristic features of this landscape are the long narrow, reversed 'S'-shaped strips within the large fields, which represent individual working plots within the field. The ridge and furrow undulations within the fields result from the use of animals, mostly oxen, to plough the land and the necessarily long turning circle for these animals. Where areas which were in use in this way have been subsequently used as grassland, the ridge and furrow and field layouts remain fossilised in the landscape, with later activity superimposed on the landscape. When the open fields were eventually enclosed, the field boundaries followed the lines of the internal cultivation strips, and so the resultant strip fields often fossilise the sinuous (aratral) shape of the oxen-ploughed ridge and furrow. This type of landscape can be seen in many areas of Britain today, but it must be emphasised that not all ridge and furrow is of medieval date, some being the result of later ploughing, although there are differences in the layout of fields and nuances in the size and shape of the ridge and furrow which may indicate the date of its formation.

4.4.5 For all the villages affected by the pipeline, the modern field systems around the centres have demonstrably developed from former open field systems around the

village. The reason for the preservation of the field pattern and earthworks within the village relates to the well-established pattern of shrunken villages within the Eden Valley, an inevitable result of population decrease, resulting from the occurrence of unfavourable conditions in a marginal environment.

4.4.6 The Hazard Area for Shap Abbey did not originally lie within the proposed pipeline corridor, but the re-routed section avoiding Shap Stone Avenue now does infringe upon the curtilage of the Abbey (Site 90). Shap was the site of the Abbey of St Mary Magdalene, a house of Premonstratensian or 'White' Canons, and the only Norman abbey in Westmorland. It was originally founded in *c*1191 at Preston Patrick in Kendal, some 20 miles south of Shap, by Thomas de Workington. The founder was apparently still alive when the House wished to move to *Hepp* (Shap), which happened in *c*1201 (Butler and Given-Wilson 1979, 344). In addition to their ecclesiastical duties, the Canons of Shap Abbey were also major landowners in the area and as such their administrative and financial interests would have affected much of the region. Although, at its most populated, the Abbey housed only 20 Canons (there may have been extra lay-members), it is evident that it controlled much of the surrounding area extending from Shap westwards towards the north-east bank of the old Haweswater lake and then southwards to include Swindale, and Sleddale. Of greatest impact on the farming landscape were the localities of the Abbey granges, often characterised by large-scale farming and huge barns for harvest stores (in this area often wool or hay). The well-developed dyke system around the land immediately in the vicinity of the Abbey (LUAU 2000 *Section 4.2.24*) is likely to have been associated with the canons (*ibid, Section 6.6.18*).

4.4.7 The existence of the Abbey at Shap, with its ecclesiastical, administrative, and agricultural importance for the neighbourhood, would have contributed towards the development and use of roads and packhorse routes in the area. The Canons of Shap Abbey would have needed to travel to and from their administrative and diocesan centre of Carlisle and they would have needed to transport goods to and from the market centres of Penrith and Kendal. There are possible remains of bridge footings dating to this period (Site 90). The pipeline corridor encompasses several transport elements which date to the medieval period, including a cross sites, (Site 39) which could be of religious significance, meeting points or directional in nature. The other type of site for this period is a medieval ford, across the river Eden (Site 6), south of Sandford. Other sites, such as stepping stones across becks (Sites 23 and 64), are of unknown date and could be medieval or even earlier.

4.5 POST-MEDIEVAL

4.5.1 The areas between Bampton and Shap and around Little Asby village are dominated by numerous quarry sites and associated lime kilns, some of which survive in good condition to the present day. There were at least 12 main quarries and 16 lime kilns, recorded in the SMR and seen on the First Edition OS maps (*Appendix 2*; Figs 2-5). There is plentiful evidence from surviving remains, landscape features, maps and documentary sources to demonstrate the effects of the lime industry in the area. Limestone was quarried either for use as stone or tile (Marshall and Davies-Shiel 1977, 159) or, once burnt, producing lime, had numerous subsequent uses including lime wash, and lime mortar. The lime was also used in agriculture, since spreading it on the fields can help neutralise soil acidity and aid the absorption of nutrients

from manure (Mawson 1980, 137); this use was probably in practice during at least the sixteenth century.

4.5.2 The North and Eastern Railway line, Eden Valley Branch, through Warcop and Sandford (Site 80), will be directly affected. Although the site is of relatively recent date, being built in the nineteenth century, railway heritage is a significant part of the post-medieval development of Britain (Jones 1996, 300). Within the surrounding landscape, existing embankments and cuttings of railways may still be found with the traces of the methods of construction and the remains of the navvy camps, which were occupied by those involved in the construction of the railways (*op cit*, 253).

4.5.3 A significant development of the seventeenth to nineteenth century period in the Shap area was that of wheeled traffic, in conjunction with the turnpiking of the Old Shap Road in 1753 (up to this point most traffic between Kendal and Penrith had travelled by pack horse up the Kentmere valley, over the Nan Bield Pass and into the Haweswater valley; LUAU 1997b). The road continued from Kendal to Penrith, skirting east of the valleys of Longsleddale and Swindale, encouraging the development of the market town of Shap. Later, in the nineteenth century, the route enabled the development of large-scale quarrying for Shap granite, slate and limestone.

5. ARCHAEOLOGICAL IMPACT

5.1 IMPACT

5.1.1 Archaeology is a continually diminishing resource and any below ground work undertaken within the study area may damage existing sites or encounter previously unrecorded archaeological deposits and features; without the recording of such finds there is a likelihood that crucial information will be destroyed. While few below ground archaeological investigations have been undertaken, to date, within the survey area, the evidence presented in this report suggests that there is a reasonable potential for the survival of archaeological deposits. The nature of any impact can only be accurately defined for known archaeological sites and resources. The impact on potential or as yet unknown archaeological sites can only be postulated at this stage.

5.1.2 Within the framework for discussing the impact of the pipeline, the importance, nature and quality of each of the 91 sites within the gazetteer was gauged, both within a national context and within the context of the pipeline. For instance the impact, whether direct of indirect, of the proposed pipeline alignment on one of the numerous post-medieval limekilns cannot be regarded as the same as the impact upon the land surrounding Shap Abbey or either of the two Roman roads.

5.1.3 Tables 1 and 2 below attempt to classify and quantify the sites and the impact of the proposed scheme, the higher the score the higher the value of the site or the greater the impact. The methodology of the scoring system is presented in *Section 2.3*, and the overall results are presented over the page (Tables 1 and 2) and graphically in Figures 6 -10. The original data for all sites has been retained, with the addition of eleven sites (Site 81-91), and it should be noted that in view of the two areas of re-routing, so far defined, the following sites now lie outside the 200m corridor and will no longer be subject to any impact:-

Section 2: 27-34, 37, 41-43, 63, 72, 75 and 78

The sites are referred to in italics in the text of the report and have been highlighted in the figures.

Table 1:- Section 1, Raisbeck to Bankwood

Site No	SMR No	Period	Condition	Assoc	Rarity	Status	Impact	Score
86	1826	4	2	3	3	-	1	-
87	1827	4	1	3	3	-	1	-
88	1828	4	1	3	3	-	1	-
9	6366	1	1	3	1	-	2	8
15	15179	1	2	3	1	-	2	9
5	4364	3	2	1	2	-	2	10
11	14950	1	2	4	1	-	2	10
14	15043	1	2	4	1	-	2	10
10	14941	1	3	4	1	-	2	11
16	15809	1	3	4	1	-	2	11
22	13618	3	1	3	2	-	2	11
80		1	4	1	1	-	4	11
2	17450	4	2	2	2	-	2	12
6	15883	2	1	3	2	-	4	12
17	15820	1	2	3	4	-	2	12
24	15176	3	2	3	2	-	2	12
13	15041	1	3	4	1	-	4	13
23	15042	3	3	3	2	-	2	13
1	3468	4	1	2	3	-	4	14
12	14952	1	4	4	1	-	4	14
21	13518	3	2	4	3	-	2	14
18	3471	3	4	3	3	-	2	15
20	6225	3	3	3	2	-	4	15
25	15177	3	3	3	2	-	4	15
7	6744	2	2	4	2	Hazard Area	4	16
8	6714	2	2	4	2	Hazard Area	4	16
19	5971	3	3	3	3	-	4	16
3	1809	3	2	4	3	-	4	17
26	6518	3	3	0	2	Hazard Area	4	18
4	1813	4	3	4	3	SM 32852	2	22

Table 2:- Section 2, Barton to Shap

Site No	SMR No	Period	Condition	Assoc	Rarity	Status	Impact	Score
27	8712	4	3	4	3	-	1	-
28	8713	4	3	4	3	-	1	-
30	3001	4	3	4	4	SM 22496	1	-
31	16839	4	3	4	4	SM 22496	1	-
32	16840	4	3	4	4	SM 22496	1	-
33	16841	4	3	4	4	SM 22496	1	-
34	16852	4	3	4	4	SM 22496	1	-
36	6738	3	2	4	2	Hazard Area	1	-
37	8701	3	3	4	2	-	1	-
42	5250	2	3	4	2	Hazard Area	1	-
43	5251	2	3	4	2	-	1	-
75	8725	3	3	4	2	-	1	-
77	1567	4	3	3	3	-	1	-
79	1568	3	3	4	3	SM 22496	1	-
41	1543	2	1	1	1	-	2	7
65	15463	1	1	2	1	-	2	7
61	14172	1	2	2	1	-	2	8
70	30936	1	1	3	1	-	2	8
39	1533	2	1	1	1	-	4	9
52	14134	1	1	4	1	-	2	9
58	14148	1	1	4	1	-	2	9
59	14158	1	1	4	1	-	2	9
64	14757	1	1	2	1	-	4	9
47	18916	2	1	3	2	-	2	10
60	14166	1	3	3	1	-	2	10
62	14175	1	3	3	1	-	2	10
83	15308	1	2	4	1	-	2	10
84	15311	1	3	3	1	-	2	10
38	19161	3	3	1	2	-	2	11
48	14020	1	3	4	1	-	2	11
50	14131	1	3	4	1	-	2	11
51	14132	1	1	4	1	-	4	11
53	14135	1	3	4	1	-	2	11
57	14147	1	1	4	1	-	4	11
66	15470	1	3	4	1	-	2	11
67	15478	1	3	4	1	-	2	11
69	30836	1	3	4	1	-	2	11
80	-	1	4	1	1	-	4	11
82	19668	2	2	3	2	-	2	11
49	14029	1	2	4	1	-	4	12
68	30826	1	4	4	1	-	2	12
40	1536	4	1	3	3	-	2	13
54	14136	1	3	4	1	-	4	13
55	14145	1	3	4	1	-	4	13
56	14146	1	3	4	1	-	4	13

85	15477	1	3	4	1	-	4	13
76	9838	3	3	4	2	-	2	14
44	6731	2	3	4	2	Hazard Area	2	15
46	6748	2	3	4	2	Hazard Area	2	15
72	1546	3	3	4	2	-	3	15
91	14139	4	2	4	3	-	3	15
71	1539	3	3	4	2	-	4	16
74	8353	3	3	4	2	-	4	16
45	6746	2	3	4	2	Hazard Area	4	17
63	14739	4	3	4	3	-	2	17
73	1965	3	3	4	3	-	4	17
90	6734	2	3	4	2	Hazard Area	4	17
81	19639	2	4	3	2	LB Grade I	4	20
35	1522	3	3	4	3	SM 27049	4	22
78	16849	4	3	4	4	SM 22496	2	22
29	1568	4	3	4	4	SM 22496	3	23

5.2 PREDICTED IMPACTS OF THE PIPELINE SCHEME

5.2.1 The predicted impact of the pipeline on the archaeological resource can be divided into that on sites which survive on the surface and are documented, and the impact on those archaeological deposits which may exist only below ground and have yet to be discovered.

5.2.2 ***Effects on Known Sites During Construction***: in archaeological terms construction work and associated ground disturbance must be seen to constitute a permanent effect upon the below ground resource. The greatest impact is likely to be through topsoil stripping and subsequent trenching. The stripping of topsoil and subsoils has the potential to destroy or severely truncate both buried and above ground archaeological remains. Until the pipeline alignment has been securely positioned, any point within the 15m easement constitutes a 'Certain and Direct Impact', although it may transpire that sections of the alignment will be routed beneath roads, rather than through fields adjacent to roads or verges; the currently issued, available drawings are ambiguous on this matter.

5.2.3 The following sites would appear to be within a 15m easement of the pipeline alignment: 1, 3, 6, 7, 8, 12, 13, 19, 20, 25, 26, 35, 39, 45, 49, 51, 54, 55, 56, 57, 64, 71, 73, 74, 80, 81, 85 and 90; therefore 28 sites out of the 91 in the gazetteer will be directly affected by the construction of a pipeline along the current proposed alignment. The construction works should if possible avoid any standing structures such as the remains of the six limekilns (Sites 12, 13, 49, 54, 55 and 56) and the larger quarries (Sites 51 and 57). Sites, such as the stepping stones (Site 64) and the ford (Site 6), the medieval cross site (Site 39) and Pipers Cross site (Site 79), are also likely to be subject to limited impact, because of their localised nature and should therefore be avoided during the course of the works. The more extensive sites, such as the medieval settlements (Sites 7, 8, 26, 45, 90 and possibly 44 and 46), field systems (Sites 19, 20, 73 and 82), cairns (Site 74), trackway (Site 71) and unknown earthworks (Site 25), may contain earthworks or buried remains which would be damaged, and this would mean that the surviving remains would lose their overall integrity.

5.2.4 ***Effects on Potential Sites During Construction:*** the predicted effects on the archaeological resource which has not yet been identified are likely to range from complete destruction of below ground and above ground archaeological features to minor damage, depending on the scale of activity, and the extent and survival of the archaeology. Heavy plant machinery used during construction would damage below ground remains, especially if the evidence is of a fragile nature. The determination of the presence of buried archaeological remains is not something that can be predicted, or conversely ruled out, with absolute certainty. The results of the present study indicate that the archaeology within the proposed corridor may encompass sites and deposits of all periods, from the Neolithic, Roman, medieval and the post-medieval period. Since some of the known sites are of great archaeological significance, such as Shap Abbey, and it is possible that unknown archaeological remains encountered may also be as important. Work during the previous pipeline in 2000 did uncover some surviving archaeology indicating that the same may occur whilst the current proposed pipeline is constructed. Were such remains to be destroyed or damaged then the fragmentary nature of their occurrence would make their loss significant.

5.2.5 ***Residual Effects:*** the predicted effects of the construction works are the likely destruction of the archaeological resource. Where the mitigation process is implemented the archaeology will be fully recorded, and therefore, following mitigation, there will be no residual effects.

5.2.6 ***Predicted Effects during the Operation of the Pipeline:*** the loss of the archaeological resource has already been discussed as a predicted effect during construction. This effectively means that, during operations along the site, the effects on the archaeology should not be a continuing issue. It is worth highlighting that, although the archaeology within the study area will have been appropriately recorded, any necessity to maintain, repair or improve services in or adjacent to the site of the archaeological resources should be subject to further archaeological investigations.

5.2.7 ***Significance of Predicted Effects:*** using the definitions for assessing the significance of effects on cultural heritage provided, the conclusion must be that the impact will be a Moderate Adverse Impact; *the proposals would have some limited direct physical impact on nationally important sites, resulting in the loss of features to such a degree that the integrity of the site is compromised but not destroyed and adequate mitigation has been specified*' and '*the proposals would have a major direct physical impact on regionally important sites, resulting in the loss of features to such a degree that the integrity of the site is destroyed'*. In addition the scheme would *'have a limited direct physical impact on or compromise the wider setting of multiple sites of regional importance, to the extent that the cumulative impact would seriously compromise the integrity of a related group of sites or historic landscape*' (DETR 1998, section *6.78*).

5.2.8 To conclude, the predicted impact of the proposed scheme can be described as a Moderate Adverse Impact due to the relatively high level of archaeological potential for the area.

6. RECOMMENDATIONS

6.1 RECOMMENDATIONS

6.1.1 It has been the intention of this project to examine the archaeological potential of the resource that will be affected by the proposed pipeline; this has shown that there are large numbers of nationally important sites and monuments, set within an extensive landscape. In its Planning Policy Guidance, *Note 16* (1990) the Department of the Environment (DoE), advises that archaeological remains should be seen as a finite, and non-renewable resource, in many cases, highly fragile and vulnerable to destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed. The project has identified the archaeological potential of the study area, thus allowing the advice of the DoE to be enacted upon. Several of the sites which are within the proposed pipeline corridor as presently defined are Scheduled Monuments, which mean that it is a criminal offence to damage them by carrying out works without consent, cause reckless or deliberate damage, or use a metal detector or remove any object found with one, without Scheduled Monument Consent (SMC) from The Department for Culture, Media and Sport. Others are subject to Local Authority planning constraints, including Hazard Areas.

6.1.2 The proposed pipeline has been re-routed to avoid the most nationally significant landscapes of great importance including all the Scheduled Monuments. This is essentially along an extensive section of High Street Roman road (Site 35) and where the route previously traversed the Neolithic Shap Stone Avenue Sites (29-34). The margins of the Stone Avenue will still be affected, principally in terms of unknown potential archaeological remains. The High Street and the second Roman road (Site 3) will both be crossed and work will have to be carried out in these locations, however a much smaller proportion of the roads will be affected and with adequate work undertaken then the overall loss of archaeology is minimised.

6.1.3 The imposition of a major pipeline through the upland areas, rich in prehistoric sites, Roman roads, and villages of medieval origin, would destroy the cohesion and character of such nationally important archaeological landscapes, even if the principal component monuments were not directly affected. Where the proposed pipeline route does not directly affect the identified surface monuments, there is nevertheless a considerable potential for sub-surface remains which may be affected. Given the very considerable archaeological importance of the landscape, there would be a need for intensive evaluation of the corridor prior to the topsoil strip. Following on from that there may need to be an extensive programme of mitigation recording to ensure that important archaeological evidence is not lost during pipeline construction.

6.1.4 The table below (Table 3) provides a summary of the recommendations for each individual site, based on the type of site and, more importantly, its extent, which affects whether it can be avoided or not. The sites which are no longer affected due to re-routing are shown in italics. In addition, the geographical proximity of the site to the easement corridor is considered, as well as the status of the site, be it scheduled or within a Hazard Area. The pipeline should be re-routed to avoid sites,

where possible, principally when the sites are of great value or part of an extensive landscape. If re-routing is not possible then the site should be evaluated to determine its form and to define requirements for mitigation. The recommendation to avoid a site means that the monument is relatively small and can thus be avoided within the easement corridor of the pipeline during the work. Likewise, a watching brief should be ongoing during the entirety of the construction work and should involve small-scale excavation during the project. No action indicates that the site is on the present evidence unlikely to be affected by the proposed pipeline construction.

Table 3:- Recommendations for Each Identified Site

Site Number	Site Type	Recommended Action	Scheduled Monument
1	Standing stone, marl pit	Re-route or Evaluate	
2	Flint scatter	Evaluate	
3	Roman road	Evaluate	
4	Roman camp, Neolithic site	Evaluate	SMC required if works affect monument
5	Coin find	No Action	
6	Medieval ford	Watching Brief	
7	Medieval village	Survey / Evaluate	
8	Medieval village	Survey / Evaluate	
9	Post-medieval farm	No Action	
10	Quarry	No Action	
11	Lime kiln	No Action	
12	Lime kiln	Avoid	
13	Lime kiln	Avoid	
14	Lime kiln	No Action	
15	Post-medieval farm	No Action	
16	Quarry	No Action	
17	Quarry	No Action	
18	Earthwork settlement	Survey / Evaluate	
19	Cropmark enclosure	Evaluate	
20	Ridge and furrow	Watching Brief	
21	Earthworks	Survey / Evaluate	
22	Farm site	No Action	
23	Stepping stones	Avoid	
24	Field boundaries	Avoid / Watching Brief	
25	Earthwork ? quarry	Survey	

26	Medieval village	Survey / Evaluate	
27	Cairns / banks	No Action	
28	Three cairns	No Action	
29	Shap Stone	Evaluate / Avoid	SMC required if works affect monument
30	Shap Stone	No Action	
31	Shap Stone	No Action	SMC required if works affect monument
32	Shap Stone	No Action	SMC required if works affect monument
33	Shap Stone	No Action	SMC required if works affect monument
34	Shap Stone	No Action	
35	Roman road	Evaluate	
36	Medieval village	No Action	
37	Roman fields	No Action	
38	Coin find	No Action	
39	Medieval cross site	No Action	
40	Tumuli	No Action	
41	Medieval cross site	No Action	
42	Deserted Medieval Village (DMV)	No Action	
43	Medieval farm	No Action	
44	Medieval village	Survey/ Evaluate	
45	Medieval village	Survey / Evaluate	
46	Medieval village	Survey / Evaluate	
47	Medieval leper hospital	No Action	
48	Lime kiln	No Action	
49	Lime kiln	Avoid	
50	Lime kiln	No Action	
51	Quarry	Avoid	
52	Quarry	No Action	
53	Lime kiln	No Action	
54	Lime kiln	Avoid	
55	Lime kiln	Avoid	
56	Lime kiln	Avoid	
57	Quarry	Avoid	
58	Quarry	No Action	
59	Quarry	No Action	
60	Smithy	No Action	

61	Bridge	No Action	
62	Smithy	No Action	
63	Quarry	No Action	
64	Stepping stones	Avoid	
65	Post-medieval reservoir	No Action	
66	Quarry	No Action	
67	Quarry	No Action	
68	Lime kiln	No Action	
69	Lime kiln	No Action	
70	Fulling mill / smithy	No Action	
71	Trackway	Survey / Evaluate	
72	Lime kiln	Avoid	
73	Field system	Survey / Evaluate	
74	Cairns	Survey / Evaluate	
75	Stone banks	No Action	
76	Platform, ridge and furrow	Watching Brief	
77	Tumulus	No Action	
78	Standing Stone	No Action	SMC required if works affect monument
79	Cross Site	No Action	
80	Railway	Survey / Evaluate	
81	Church	Avoid	Listed Building:
82	Field System / Lynchets	No Action	
83	Lime Kiln	No Action	
84	Quarry	Avoid	
85	Lime Kiln	Avoid	
86	Barrow / Cist	No Action	
87	Findspot	No Action	
88	Barrow / Mound	No Action	
90	Medieval Village	Survey / Evaluate	
91	Stone	Avoid / Evaluate	

6.1.5 ***Scheduled Monument Consent:*** the line of the pipeline has been specifically altered so as to avoid scheduled monuments, and this has dramatically reduced the number of monuments that will warrant the applications for scheduled monument consent. There are however, two remaining sites where the pipeline may affect the extent of the scheduled monuments, and would therefore require scheduled monument consent (Sites 29 and 35). Monument 29 is a stone at the north-western end of the Shap Avenue, and as such is close to the point where the pipeline

diverts to avoid the avenue. Given the sensitivity of the monument, any application will need to anticipate a programme of archaeological evaluation in the vicinity of the monument to identify any archaeological sub-surface deposits.

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APPENDIX 1
PROJECT DESIGN

Oxford Archaeology North

October 2002

HAYESWATER PIPELINE
BETWEEN HARTSOP AND BANKWOOD

CUMBRIA

PRELIMINARY DESK-BASED APPRAISAL

Proposals

The following project design is offered in response to a request from Barbara Cardie, United Utilities for a desk-based investigation of the proposed route for a pipeline between Hartsop and Bankwood, Cumbria.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 Oxford Archaeology North has been invited by Barbara Cardie, United Utilities, to submit a project design and costs for a preliminary desk-based appraisal on the line of a proposed Hayeswater pipeline between Hartsop and Bankwood. The preliminary study is required only to inform the proposed route of the pipeline, and is therefore a rapid investigation to establish the principal archaeological resource along the line of the route and to make recommendation for the pipes alignment.

1.1.2 The line of the proposed pipeline is divided into four principal sections:

- Hartsop to Barton
- Barton to Shap
- Raisbeck to Asby
- Asby to Bankwood

1.1.3 The Hartsop to Barton section will almost entirely follow the line of an existing pipeline and will not create any significant new disturbance. As such this route will minimise the threat to the archaeological resource, and is the preferred route. It is not therefore required that this route be investigated at this stage.

1.1.4 The Barton to Shap section will extend across areas of archaeological potential, where there is no previous known disturbance and consequently there is a need to identify the archaeological resource that will be impacted by this route. The north-westernmost part of this section, across Askham Fell, has already been examined by OA North (OA North 2002), which incorporates the results of a survey undertaken in 1988 by LUAU (now OA North). The investigation will incorporate the summarised results of this earlier study within the present study report.

1.1.5 The Raisbeck to Asby section extends almost entirely along the line of roads, which in some instances will have already been disturbed by services. When the pipes extend along the road there is no need for a wide top-soil stripped easement corridor and consequently will have a much reduced impact on any archaeology than routes extending across open fields. It is therefore the preferred route and it is not therefore required that this route be investigated at this stage.

1.1.6 The Asby to Bankwood section will, for the most part extend across fields and there is considerable potential for the impacting of archaeological monuments. There is consequently a need for a preliminary investigation of the archaeology along the route to inform the route planning.

1.1.7 The present study will consequently only examine the Barton to Shap and the Asby to Bankwood sections.

1.2 OXFORD ARCHAEOLOGY (NORTH)

1.2.1 Oxford Archaeology North (OAN) (formerly Lancaster University Archaeological Unit) has considerable experience of the evaluation and assessment of sites of all periods, having undertaken a great number of small and large scale projects during the past 20 years. Evaluations and assessments have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. OA North has undertaken numerous archaeological assessments and landscapes within Cumbria; the most pertinent being a detailed survey of Askham Fell, as part of the Lake District National Park Survey (OA North 2002) and a survey of the United Utilities Haweswater Estate (LUAU 1997), through which the proposed pipeline extends.

1.2.2 OA North has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. OA North and all its members of staff operate subject to the Institute of Field Archaeologists (IFA) Code of Conduct, and OA North is a registered organisation with the IFA (No 17).

2. OBJECTIVES

2.1 The following programme has been designed to provide a preliminary documentary study in order to assess the alignment of the proposed route. The required stages to achieve these ends are as follows:

2.2 ***Desk Top Survey***
To accrue an organised body of data to inform the scheme. It requires an appraisal of the archaeological and landscape resource, including an examination of the County Sites and Monuments Record (SMR), any aerial photography at that source, and the Ordnance Survey First Edition coverage for the proposed route.

2.3 ***Report***
A written report will assess the significance of the data generated by this programme within a local and regional context in order to inform the proposed routing of the pipeline. It will advise on the impact of the pipeline on the archaeological resource, and will identify both opportunities and constraints for the pipeline.

3. METHODS STATEMENT

3.1 The following work programme is submitted in line with the stages and objectives of the archaeological work summarised above. The defined programme provides for both a documentary study and a field identification survey of the study area.

3.2 DESK- BASED STUDY

3.2.1 The following will be undertaken as appropriate, depending on the availability of source material and will examine the following sections of the pipeline:

- Barton to Shap Section (NY 471 220 to NY 561 126) *c*21.5 km
- Little Asby to Bankwood Section (NY 699 098 to NY 731 194) *c*14.0 km

The work will examine a corridor of 200m centred on the proposed route line.

3.2.2 ***Documentary and cartographic material:*** this work will rapidly address those sources of information that may inform alignment of the proposed pipeline. It will include an appraisal of the Cumbria Sites and Monuments Record, as well as the OS First Edition maps for the relevant sections of the route (see above). Particular emphasis will be upon the early cartographic evidence which has the potential to inform the post-medieval occupation and land-use of the area. Any photographic material lodged in the County Sites and Monuments Record or County record Office will also be studied. This work will involve visits of the following repositories: Cumbria Sites and Monuments Record and the Cumbria Record Office (Kendal).

3.2.3 ***Aerial Photography:*** a brief survey of the extant air photographic cover will be undertaken, and will examine those records held by the Cumbria Sites and Monuments.

3.3 REPORT

3.3.1 ***Archive:*** the results of Stage 3.2 will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*The 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. It will include summary processing and analysis of any features and finds recovered during fieldwork.

3.3.2 This archive can be provided in the English Heritage Central for Archaeology 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 National Monuments Record (RCHM(E)), as appropriate. OA North practice is to deposit the original record archive of projects (paper, magnetic, and plastic media) with the Cumbria Record Office.

3.3.3 ***Collation of data:*** the data generated by 3.2 (above) will be collated and analysed in order to provide an appraisal 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 establishing the route of the proposed pipeline.

3.3.4 ***Report:*** one bound and one unbound copy of the report will be submitted to the Client, and a further copy submitted to the Cumbria Sites and Monuments Record. The report will include a copy of this project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, together with appropriate illustrations, including maps and gazetteers of known or suspected sites identified within or immediately adjacent to the study corridor. It will also include a complete bibliography of sources from which the data has been derived, and a list of further sources identified during the programme of work, but not examined in detail. It will include a copy of the project design.

3.3.5 The report will identify areas of defined archaeology, an assessment and statement of the actual and potential archaeological significance of any features within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map for the identified resource.

3.3.6 ***Proposals:*** the report will make a clear statement of the impact of the pipeline upon the identified archaeological resource. It will identify both the opportunities and the constraints for the development and will make recommendations for the alignment of the pipeline.

3.3.7 ***Confidentiality:*** the 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; they are 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.

4. WORK TIMETABLE

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

i ***Desk-Based Study***
5 days (on site)

ii ***Report***
6 days (desk-based).

4.2 OA North can execute projects at very short notice once an agreement has been signed with the client. The desk-based study is scheduled for completion within two weeks from the completion of the field work.

4.3 The project will be under the project management of **Jamie Quartermaine, BA Surv Dip MIFA** (OA North Project Manager) to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise.

APPENDIX 2
GAZETTEER OF SITES

SECTION 1: RAISBECK TO BANKWOOD

Site Number	**1**	**NGR**	NY 722 5115
Site name	Gallansy Standing Stone	**Period**	Prehistoric
Site Type	Site of standing stone	**APs**	MU not found
SMR Number	3486		
Description	The possible location of a standing stone. It was not seen in 1995. It is marked as the site of a marl pit on the First Edition OS map.		

Site Number	**2**	**NGR**	NY 646 5075
Site name	Raisbeck	**Period**	Prehistoric
Site Type	Findspots	**APs**	-
SMR Number	17450		
Description	A number of flint implements found around Raisbeck.		

Site Number	**3**	**NGR**	NY 741 5167
Site name	A66 Roman road	**Period**	Roman
Site Type	Earthwork	**APs**	-
SMR Number	1809		
Description	The alignment of the known Roman road which is mostly beneath the present A66. The section of the road at this point is also part of Site 4 and includes a 200m length of Roman road running along the south side of this camp. The Roman road survives as a slight terrace on the hillslope south of the camp and north of the modern road.		

Site Number	**4**	**NGR**	NY 7412 51674
Site name	Camp near Sandford	**Period**	Roman
Site Type	Cropmark and Earthwork	**APs**	STJ DO 085
SMR Number	1813	**SM Number**	32852
Description	The site lies close to the Roman road, Site 3. The monument includes the buried remains of a Roman camp, together with the earthworks and a section of the road (Site 3). The Roman camp is visible as crop marks on an aerial photograph which also shows faint traces of a possible smaller and earlier Roman camp partly underlying the larger camp's south-western corner. There is a curvilinear feature immediately to the east of the larger camp. A Neolithic axe has been recovered in the course of ploughing and there is the possibility that the Roman site overlies a Neolithic site.		

Site Number	**5**	**NGR**	NY 700 100
Site name	Brough	**Period**	Roman
Site Type	Findspot	**APs**	-
SMR Number	4364		
Description	A coin showing HADRIANVS wearing a spiked crown, exact position unknown.		

Site Number	**6**	**NGR**	NY 72665 15835
Site name	Sandford Ford	**Period**	Medieval
Site Type	Site of ford	**APs**	-

SMR Number	15883
Description	A modern bridge on the site of a ford over the Eden along a known route.

Site Number	**7**	**NGR**	NY 6455 0753
Site name	Raisbeck Village	**Period**	Medieval
Site Type	Hazard Area	**APs**	-
SMR Number	6744		
Description	This includes possible earthworks relating to the medieval occupation of a now shrunken village.		

Site Number	**8**	**NGR**	NY 7288 1616
Site name	Sandford Village	**Period**	Medieval
Site Type	Hazard Area	**APs**	-
SMR Number	6714		
Description	This includes possible earthworks relating to the medieval occupation of a now shrunken village.		

Site Number	**9**	**NGR**	NY 7274 1609
Site name	Westgate, Sandford	**Period**	Post-Medieval
Site Type	Site	**APs**	-
SMR Number	636		
Description	A farmstead mentioned in 1720.		

Site Number	**10**	**NGR**	NY 6737 0775
Site name	Tarn Pike, Orton	**Period**	Post-Medieval
Site Type	Group of quarries	**APs**	-
SMR Number	14941		
Description	Tarn Pike Quarries forms a group very close together, just west of Tarn Pike.		

Site Number	**11**	**NGR**	NY 6912 0968
Site name	Asket Dub, Asby	**Period**	Post-Medieval
Site Type	Site of pile of stones	**APs**	-
SMR Number	14950		
Description	This site appears to be marked by a hollow and a pile of stones, which were seen in 1995.		

Site Number	**12**	**NGR**	NY 6980 0974
Site name	Town End, Asby	**Period**	Post-Medieval
Site Type	Structure	**APs**	-
SMR Number	14952		
Description	A lime kiln within the farmyard area of Townend Farm, which is in very good condition, and has a flat-headed arched access of 2.4m height.		

Site Number	**13**	**NGR**	NY 7000 0982
Site name	Town End, Asby	**Period**	Post-Medieval
Site Type	Structure	**APs**	-
SMR Number	15041		
Description	A lime kiln of unusual square form and in good condition; it is built of stone.		

Site Number	**14**	**NGR**	NY 7090 0984
Site name	Potts, Crosby Garrett	**Period**	Post-Medieval
Site Type	Limekiln	**APs**	-
SMR Number	15043		
Description	The location of a limekiln.		

Site Number	**15**	**NGR**	NY 7087 0985
Site name	Potts Farm, Crosby Garrett	**Period**	Post-Medieval
Site Type	Ruined Building	**APs**	-
SMR Number	15179		
Description	Potts Farm and attached barn, now a partly roofed ruin, appears to have been rebuilt in the nineteenth century. It may have originally been built in the seventeenth century but is more likely eighteenth century in date.		

Site Number	**16**	**NGR**	NY 7248 1208
Site name	Grassgill, Soulby	**Period**	Post-Medieval
Site Type	Quarries and limekiln	**APs**	-
SMR Number	15809		
Description	A set of quarries and associated lime kiln.		

Site Number	**17**	**NGR**	NY 7230 1120
Site name	Newlands, Soulby	**Period**	Post-Medieval
Site Type	Site of a quarry	**APs**	-
SMR Number	15820		
Description	A quarry which lay beside a track, with which it is possibly associated.		

Site Number	**18**	**NGR**	NY 7146 1010
Site name	Water Houses, Crosby Garrett	**Period**	Unknown
Site Type	Earthworks	**APs**	MU E77, not found
SMR Number	3471		
Description	A series of sub-rectangular, grass-covered earthworks appears to abut an earlier field boundary; it cuts across the present field system on a diagonal line. There are also traces of narrow ridge and furrow.		

Site Number	**19**	**NGR**	NY 717 140
Site name	Bleatarn Common	**Period**	Unknown
Site Type	Cropmark	**APs**	CCC 2516: 9-11
SMR Number	5971		
Description	An enclosure appears as a cropmark; there are no features visible at ground level.		

Site Number	**20**	**NGR**	NY 741 177
Site name	Warcop	**Period**	Unknown
Site Type	Earthwork	**APs**	CCC 2799: 17A
SMR Number	6225		
Description	An area of ridge and furrow and a possible contemporary bank on the slope above a small beck.		

Site Number	**21**	**NGR**	NY 738 186
Site name	Lycum Sike, Warcop	**Period**	Unknown
Site Type	Earthwork	**APs**	CCC 2802
SMR Number	13518		

Description A series of unclassified earthworks and trackways may relate to military activity.

Site Number	**22**	**NGR**	NY 739 192
Site name	Storth Farm, Murton	**Period**	Unknown
Site Type	Site of farm buildings	**APs**	-
SMR Number	13618		
Description	Some now destroyed farm buildings that were extant at least as early as 1859.		

Site Number	**23**	**NGR**	NY 70825 09950
Site name	Potts Beck, Asby	**Period**	Unknown
Site Type	Structure	**APs**	
SMR Number	15042		
Description	A set of stepping stones, near Potts farm.		

Site Number	**24**	**NGR**	NY 713 093
Site name	New Close Lane, Crosby Garrett	**Period**	Unknown
Site Type	Earthwork	**APs -**	
SMR Number	15176		
Description	The faint traces of possible early field boundaries.		

Site Number	**25**	**NGR**	NY 712 094
Site name	New Close Lane B, Crosby Garrett	**Period**	Unknown
Site Type	Earthwork	**APs -**	
SMR Number	1517		
Description	A possible sub-circular feature/depression c7m across with visible chunks of limestone, suggesting that the site may result from quarrying.		

Site Number	**26**	**NGR**	NY 692 091
Site name	Asby	**Period**	Unknown
Site Type	Hazard Area	**APs**	-
SMR Number	6518		
Description	This site includes numerous earthworks and cairns in an upland environment.		

SECTION 2: BARTON TO SHAP

Site Number	**27**	**NGR**	NY 483 229
Site name	Askham Fell	**Period**	Unknown
Site Type	Earthworks	**APs**	-
SMR Number	8712		
Description	A straight, ill-defined stone bank cut by a large, prominent earthwork consisting of banks and ditches; nearby are short crescent-shaped mounds associated with other stone banks which may be elements of a simple field system (OA North 2002, Sites 138-143).		

Site Number	**28**	**NGR**	NY 4835 2305
Site name	Heughscar Hill, Askham	**Period**	Prehistoric
Site Type	Cairnfield	**APs**	-
SMR Number	8713		
Description	A scatter of three small cairns located on top of Ridding Brow.		

Site Number	**29**	**NGR**	NY 550 160
Site name	Shap Standing Stone and Stone Circle	**Period**	Prehistoric: Neolithic
Site Type	Standing Monument	**APs**	MU CS 52:6
SMR Number	1568	**SM Number**	22496
Description	The remains of a large megalithic monument, which are thought to be the remains of two avenues and two circles. The Shap Stone Alignment comprises 14 unevenly spaced stones of varying height, aligned approximately north-west/south-east over a distance of 2.4km, lying west and north-west of Shap village. The monument is thus divided into 14 separate areas, each relating to the relevant stone, including the Small Thunder Stone (Site 31), Thunder Stone (Site 63), a roughly triangular stone (Site 33), a fallen smaller rounded stone (Site 32), a stone lying on its side (Site 34), the Goggleby Stone (Site 30), a broken stone (Site 78), and a fallen triangular stone (Site 79). The remaining nine stones are outside the proposed working corridor, and are thus not included in the gazetteer. The stone alignment survives well and is a rarity in Cumbria. It is exceptionally long and lies close to other prehistoric monuments, such as Skellaw Hill Bowl Barrow (Site 77) and Shap Stone Circle (SMR 16850 (outside working corridor)), and thus indicates the importance of this area in prehistoric times.		

Site Number	**30**	**NGR**	NY 5592 1509
Site name	The Goggleby Stone	**Period**	Prehistoric: Neolithic
Site Type	Standing Monument	**APs**	-
SMR Number	3001	**SM Number**	22496
Description	The Goggleby Stone, is a component of an alignment along one side of the Shap Stone Avenue. It had fallen and was re-erected in 1975. Excavation revealed the stone had been set in clay and then wedged upright with packing stones; finds included pieces of chert and a flint scraper (Clare 1978). The stone stands 2m high, broad end uppermost, and has a circumference of 6.5m. See full details under Site 29.		

Site Number	**31**	**NGR**	NY 5517 1592
Site name	Small Thunder Stone	**Period**	Prehistoric: Neolithic
Site Type	Standing Monument	**APs**	-
SMR Number	16839	**SM Number**	22496
Description	The Small Thunder Stone is the most northerly stone and has fallen flat. It measures c2.5m x 2m and bears a cup and ring mark decoration. See full details under Site 29.		

Site Number	**32**	**NGR**	NY 5555 1526
Site name	Shap Stone	**Period**	Prehistoric: Neolithic
Site Type	Standing Monument	**APs**	-
SMR Number	16840	**SM Number**	22496
Description	A fallen smaller rounded stone c1.4m long x 1m broad which forms part of the Shap Stone Alignment. See full details under Site 29.		

Site Number	**33**	**NGR**	NY 5555 1528
Site name	Shap Stone	**Period**	Prehistoric: Neolithic
Site Type	Standing Monument	**APs**	-
SMR Number	16841	**SM Number**	22496
Description	This stone forms part of the Shap Stone Alignment; it is roughly triangular, 1-1.5m high, c3m in circumference, and is now embedded in a drystone wall. See full details under Site 29.		

Site Number	**34**	**NGR**	NY 5584 1520
Site name	Shap Stone	**Period**	Prehistoric: Neolithic
Site Type	Standing Monument	**APs**	-
SMR Number	16852	**SM Number**	22496
Description	A stone lying on its side, 3m long and 5.5m in girth. On its wider end is a cup and ring mark carving with a second cup mark close by. See full details under Site 29.		

Site Number	**35**	**NGR**	NY 4736 2197 - 4910 2458
Site name	High Street, Patterdale	**Period**	Roman
Site Type	Road Alignment	**APs**	CCC 3011: 15,23-4, 26-7, MU CS 82: 9
SMR Number	1522	**SM Number**	27049
Description	The course of the Roman road known as High Street, which runs from the fort at Brougham to Ambleside, parts of which are scheduled. At its northern end the area is boggy and the agger does not show up well. On the higher ground, in some places, a terrace averaging 6m wide has been formed. Beyond the junction with the bridleway to Pooley Bridge, up to the Cockpit Stone Circle, the agger is clear, with patches of metalling and kerb stones; parts of the road over Askham Fell are in very good condition. There is evidence of gravel and metalling and ditches on either side of the road. Where the road surface has been exposed, a core of small and sub-rounded stones is visible.		

Site Number	**36**	**NGR**	NY 560 150
Site name	Shap Village	**Period**	Medieval
Site Type	Hazard Area	**APs**	-
SMR Number	6738		
Description	This comprises possible earthworks relating to the medieval occupation surviving as a result of the shrinking of Shap village.		

Site Number	**37**	**NGR**	NY 477 220
Site name	Elder Beck, Askham	**Period**	Roman / Prehistoric ?
Site Type	Earthworks	**APs**	-
SMR Number	8701		
Description	This site includes a series of regular stone banks, and a hut circle extending out from High Street, Site 35, and includes stone clearance cairns contained by the fieldbanks (OA North 2002; sites 1-18, 100).		

Site Number	**38**	**NGR**	NY 510 230
Site name	Askham	**Period**	Roman
Site Type	Findspot	**APs**	-
SMR Number	19161		
Description	A Vespasian As coin find; its exact position is unknown.		

Site Number	**39**	**NGR**	NY 5232 1822
Site name	Knipe Moor Cross, Bampton	**Period**	Medieval
Site Type	Site of cross	**APs**	-
SMR Number	1533		
Description	A possible thirteenth century boundary cross stood at a junction on the road to Knipe Hall.		

Site Number	**40**	**NGR**	NY 5390 1729
Site name	Benny Howe Barrow	**Period**	Medieval
Site Type	Barrow	**APs**	-
SMR Number	1536		
Description	A tumulus recorded in 1830s; it was excavated, revealing human bones and daggers. It was suggested as Scandinavian from its name.		

Site Number	**41**	**NGR**	NY 560 150
Site name	Almbank, Shap	**Period**	Medieval
Site Type	Socket of a boundary cross	**APs**	RXB 3404: 19
SMR Number	1543		
Description	The socket of a boundary cross.		

Site Number	**42**	**NGR**	NY 493 239
Site name	Higher Winder, Askham	**Period**	Medieval
Site Type	Earthwork	**APs**	CCC 2466: 16, 3011:21-2
SMR Number	5250		
Description	A deserted medieval village. It has a rectangular enclosure and a trackway leading towards High Winder which may be a Roman marching camp. It is reported by the Medieval Village Research Group as a deserted medieval village (DMV), which was mentioned in the twelfth, sixteenth and seventeenth centuries, but not mentioned in the Lay Subsidy Rolls of 1334/36.		

Site Number	**43**	**NGR**	NY 493 240
Site name	Higher Winder Farmstead	**Period**	Medieval
Site Type	Earthwork	**APs**	CCC 2466: 16, 3011:21-2
SMR Number	5251		
Description	A settlement/farmstead site. This may be part of the DMV at High Winder (Site 42).		

Site Number	**44**	**NGR**	NY 510 190
Site name	Low Knipe Village	**Period**	Medieval
Site Type	Hazard Area	**APs**	CCC 2466: 16
SMR Number	6731		
Description	This includes possible earthworks relating to the medieval occupation of the village, resultant from the shrinking of Low Knipe village.		

Site Number	**45**	**NGR**	NY 510 230
Site name	Askham Village	**Period**	Medieval

Site Type	Hazard Area	**APs**	CCC 3011: 31, 33-6, 38
SMR Number	6746		MU CS 01: 13, 02:2-5, 73: 24-5, 27, 87: 1
Description	This includes possible earthworks relating to the medieval occupation of the village, resultant from the shrinking of Askham village.		

Site Number	**46**	**NGR**	NY 510 220
Site name	6748	**Period**	Medieval
Site Type	Helton Village	**APs**	CCC 3011: 17, 39, 41-2
SMR Number	Hazard Area		
Description	This includes possible earthworks relating to the medieval occupation of the village, resultant from the shrinking of Helton village.		

Site Number	**47**	**NGR**	NY 5165 1840
Site name	Leper Hospital, Bampton	**Period**	Medieval
Site Type	Site of a leper hospital	**APs**	-
SMR Number	18916		
Description	Documentary evidence records a leper hospital in the Bampton area.		

Site Number	**48**	**NGR**	NY 35338 1805
Site name	Scarside, Bampton	**Period**	Post-Medieval
Site Type	Structure	**APs**	-
SMR Number	14020		
Description	A lime kiln dating between 1838 and 1899.		

Site Number	**49**	**NGR**	NY 5367 1741
Site name	Benny House, Shap	**Period**	Post-Medieval
Site Type	Structure	**APs**	-
SMR Number	14029		
Description	A lime kiln, probably early nineteenth century in date, and built of rough stone.		

Site Number	**50**	**NGR**	NY 5349 1780
Site name	Lake View A, Lowther	**Period**	Post-Medieval
Site Type	Structure	**APs**	-
SMR Number	14131		
Description	A series of lime kilns adjacent to a quarry.		

Site Number	**51**	**NGR**	NY 5355 1775
Site name	Lake View B, Lowther	**Period**	Post-Medieval
Site Type	Site	**APs**	-
SMR Number	14132		
Description	A quarry adjacent to lime kilns.		

Site Number	**52**	**NGR**	NY 545 166
Site name	Crag Lane A, Shap	**Period**	Post-Medieval
Site Type	Site	**APs**	-
SMR Number	14134		
Description	Three quarries adjacent to a lime kiln.		

Site Number	**53**	**NGR**	NY 5447 1671
Site name	Crag Lane B, Shap	**Period**	Post-Medieval
Site Type	Standing Structure	**APs**	-
SMR Number	14135		
Description	A lime kiln dating to the early nineteenth century, apparently complete and of medium size.		

Site Number	**54**	**NGR**	NY 5471 1655
Site name	Crag Lane C, Shap	**Period**	Post-Medieval
Site Type	Standing Structure	**APs**	-
SMR Number	14136		
Description	A medium-sized lime kiln, with the pot infilled, which is associated with Site 53.		

Site Number	**55**	**NGR**	NY 5395 1708
Site name	Abbott House, Shap	**Period**	Post-Medieval
Site Type	Standing Structure	**APs**	-
SMR Number	14145		
Description	A moderate-sized lime kiln, dating to the early nineteenth century.		

Site Number	**56**	**NGR**	NY 5402 1703
Site name	Abbott Hall A, Shap	**Period**	Post-Medieval
Site Type	Standing Structure	**APs**	-
SMR Number	14146		
Description	A lime kiln dating to about 1899.		

Site Number	**57**	**NGR**	NY 5397 1706
Site name	Abbott Hall B, Shap	**Period**	Post-Medieval
Site Type	Site	**APs**	-
SMR Number	14147		
Description	A quarry adjacent to lime kiln, Site 56.		

Site Number	**58**	**NGR**	NY 5378 1717
Site name	Benny Howe, Shap	**Period**	Post-Medieval
Site Type	Site	**APs**	-
SMR Number	14148		
Description	A quarry, probably for limestone.		

Site Number	**59**	**NGR**	NY 530 184
Site name	Fieldgate House, Bampton	**Period**	Post-Medieval
Site Type	Site	**APs**	-
SMR Number	14158		
Description	A quarry and possible lime kilns, not earlier than 1920.		

Site Number	**60**	**NGR**	NY 5213 1811
Site name	Bampton Grange	**Period**	Post-Medieval
Site Type	Roofed Building	**APs**	-
SMR Number	14166		
Description	A forge / smithy shown on the 1867 First Edition OS map and later editions.		

Site Number	**61**	**NGR**	NY 5185 1808
Site name	Black Bridge, Bampton	**Period**	Post-Medieval
Site Type	Structure	**APs**	-
SMR Number	14172		
Description	A documentary reference in 1689, recording a point of access from Bampton to Bampton Grange over Haweswater Beck.		

Site Number	**62**	**NGR**	NY 5155 1826
Site name	Bampton	**Period**	Post-Medieval
Site Type	Roofed Building	**APs**	-
SMR Number	14175		
Description	Bampton Smithy shown on the First Edition OS map.		

Site Number	**63**	**NGR**	NY 5514 1577
Site name	Thunder Stone	**Period**	Prehistoric - Neolithic
Site Type	Standing Stone	**APs**	-
SMR Number	14739		
Description	Thunder Stone, the largest in the alignment. This is a glacial erratic measuring c10m in girth and up to 3m high. See full details under Site 29		

Site Number	**64**	**NGR**	NY 5612 1411
Site name	Docker Beck, Shap	**Period**	Post-Medieval
Site Type	Site of	**APs**	-
SMR Number	14757		
Description	Stepping stones linking the lane running south from Skellow Hill via Copyhill.		

Site Number	**65**	**NGR**	NY 5080 2085
Site name	Setterah Reservoir, Askham	**Period**	Post-Medieval
Site Type	Reservoir	**APs**	-
SMR Number	15463		
Description	This site appears only on the OS First Edition map, to the south of Helton.		

Site Number	**66**	**NGR**	NY 5107 2282
Site name	Low Donald Wood A, Askham	**Period**	Post-Medieval
Site Type	Site	**APs**	-
SMR Number	15470		
Description	A quarry, associated limekiln and track south of Askham (see Site 69 for the lime kiln).		

Site Number	**67**	**NGR**	NY
Site name	Townhead, Askham	**Period**	Post-Medieval
Site Type	Site	**APs**	CCC 3011: 37, 39
SMR Number	15478		MU CS 47: 8
Description	Town Head Quarries lie north-west of Townhead farm and are associated with various lime kilns.		

Site Number	**68**	**NGR**	NY 5505 1605
Site name	High Buildings, Shap	**Period**	Post-Medieval
Site Type	Structure	**APs**	-
SMR Number	30826		
Description	A medium-sized lime kiln, dating to the early nineteenth century.		

Site Number	**69**	**NGR**	NY 5108 2279
Site name	Low Donald Wood B, Askham	**Period**	Post-Medieval
Site Type	Structure	**APs**	-
SMR Number	30836		
Description	A large lime kiln, dating to the early nineteenth century.		

Site Number	**70**	**NGR**	NY 5102 1951
Site name	Butterwick, Bampton	**Period**	Post-Medieval
Site Type	Site of a fulling mill	**APs**	-
SMR Number	30936		
Description	The site of a fulling mill, probably dating to the early nineteenth century.		

Site Number	**71**	**NGR**	NY 5406 1700
Site name	Rosgill, Shap	**Period**	Unknown
Site Type	Earthwork	**APs**	RAF 540 1323 F 21
SMR Number	1539		0017 and 0018, 4 6 54
Description	From the stone circle site at NY49711827 a sunken trackway runs in the direction of Rosgill. It was probably an ancient track.		

Site Number	**72**	**NGR**	NY 5510 1600
Site name	High Barn, Shap	**Period**	Unknown
Site Type	Ruined Building	**APs**	RAF 540 1323 F 22
SMR Number	1546		0015 and 0016, 4 6 54
Description	Foundations of a building indicating walls and other structures are in a field north-north-west of the Thunder Stone (Site 63). They are probably of relatively recent date and may be associated with a lime kiln in the north of the field at NY 5505 1605.		

Site Number	**73**	**NGR**	NY 535 181
Site name	Bampton	**Period**	Unknown
Site Type	Earthwork	**APs**	CCC 1668: 20-1
SMR Number	1965		
Description	Traces of cultivation strips, field boundaries, ridge and furrow.		

Site Number	**74**	**NGR**	NY 540 170
Site name	Wilson Scar, Bampton	**Period**	Unknown
Site Type	Earthwork	**APs**	-
SMR Number	8353		
Description	The site is very dispersed, comprising banks and isolated cairns situated on unenclosed land, surveyed by Cumbria and Lancashire Archaeological Unit (Turner 1991; Site Nos 96, 98 - 99 and 200).		

Site Number	**75**	**NGR**	NY 486 235
Site name	Heugh Scar, Askham	**Period**	Unknown
Site Type	Earthwork	**APs**	-
SMR Number	8725		
Description	A group of three short lengths of stone bank adjacent to Heugh Scar, which may represent two sides of an enclosure (OA North 2002, Sites 213 - 215).		

Site Number	**76**	**NGR**	NY 5140 1841
Site name	Thornthwaite Hall, Bampton	**Period**	Unknown

Site Type	Earthwork	**APs**	MU CS 49: 17-8,
SMR Number	9838		52: 0-2, 47: 29
Description	This shows a squarish faint earthwork outline or platform. It is c70 x 70m with slight internal banks and ditches, with possible earthworks to the south of the site. There are also traces of straight and narrow ridge and furrow.		

Site Number	77	**NGR**	NY 5564 1546
Site name	Skellaw Hill Bowl Barrow	**Period**	Prehistoric - Bronze Age
Site Type	Tumulus	**APs**	-
SMR Number	1567		
Description	A bowl barrow shown on the OS First Edition map.		

Site Number	78	**NGR**	NY 5605 1496
Site name	Shap	**Period**	Prehistoric - Neolithic
Site Type	Standing Stone	**APs**	-
SMR Number	16849	**SM Number**	22496
Description	A broken stone 1.5m high and 3m in circumference embedded in a drystone wall. See full details under Site 29.		

Site Number	79	**NGR**	NY 7217 1312
Site name	Sawbridge	**Period**	Medieval ?
Site Type	Site of Cross	**APs**	-
SMR Number			
Description	The site of a cross depicted on the OS First Edition map.		

Site Number	80	**NGR**	NY 7200 1746 - 7500 1593
Site name	North and Eastern Railway	**Period**	Nineteenth century
Site Type	Railway	**APs**	-
SMR Number			
Description	The line of the North and Eastern Railway (Eden Valley branch through Warcop and Sandford).		

Site Number	81	**NGR**	NY 4875 2536
Site name	St Michael's Church	**Period**	Medieval
Site Type	Church and Churchyard	**APs**	-
SMR Number	19639	**LB Status**	Grade I
Description	Standing building with elements of its structure dating to the twelfth to fifteenth centuries and later modifications. Church is set in circular churchyard which could be consistent with an early date.		

Site Number	82	**NGR**	NY 4863 2537
Site name	Low Brow	**Period**	Medieval
Site Type	Earthworks	**APs**	-
SMR Number	19668		
Description	North-east / south-west aligned lynchets.		

Site Number	83	**NGR**	NY 4981 2452
Site name	High Winder Track	**Period**	Post-Medieval
Site Type	Lime Kiln	**APs**	-
SMR Number	15308		
Description	A lime kiln dating to about mid nineteenth century.		

Site Number	**84**	**NGR**	NY 4959 2497
Site name	High Street	**Period**	Post-Medieval
Site Type	Quarry	**APs**	-
SMR Number	15311		
Description	Site of a quarry beside roman road alignment.		

Site Number	**85**	**NGR**	NY 5007 2427
Site name	Townhead	**Period**	Post-Medieval
Site Type	Lime Kiln	**APs**	-
SMR Number	15477		
Description	Three kilns in close proximity, in good condition.		

Site Number	**86**	**NGR**	NY 7333 1711
Site name	Sandford Moor	**Period**	Prehistoric ?
Site Type	Barrow	**APs**	-
SMR Number	1826		
Description	A burial cist excavated in 1776, feint traces survive, possibly Bronze Age or Anglo-Saxon.		

Site Number	**87**	**NGR**	NY 7339 1707
Site name	Sandford	**Period**	Bronze Age
Site Type	Findspot	**APs**	-
SMR Number	1827		
Description	Location of a barrow excavated by Greenwell. Flint found in 1972.		

Site Number	**88**	**NGR**	NY 7340 1710
Site name	Sandford	**Period**	Prehistoric
Site Type	Barrow	**APs**	-
SMR Number	1828		
Description	Documentary references to mounds, no visible traces survive.		

Site Number	**90**	**NGR**	NY 5466 1509
Site name	Shap Abbey Village	**Period**	Medieval
Site Type	Hazard Area	**APs**	-
SMR Number	6734		
Description	Hazard area for Shap Abbey Curtillage. Bridge footings have been identified at NY 54378 15225.		

Site Number	**91**	**NGR**	NY 54889 15894
Site name	Buck Stone, Shap	**Period**	Unknown
Site Type	Stone	**APs**	-
SMR Number	14139		
Description	Buck Stone shown on the first edition OS map.		

ILLUSTRATIONS

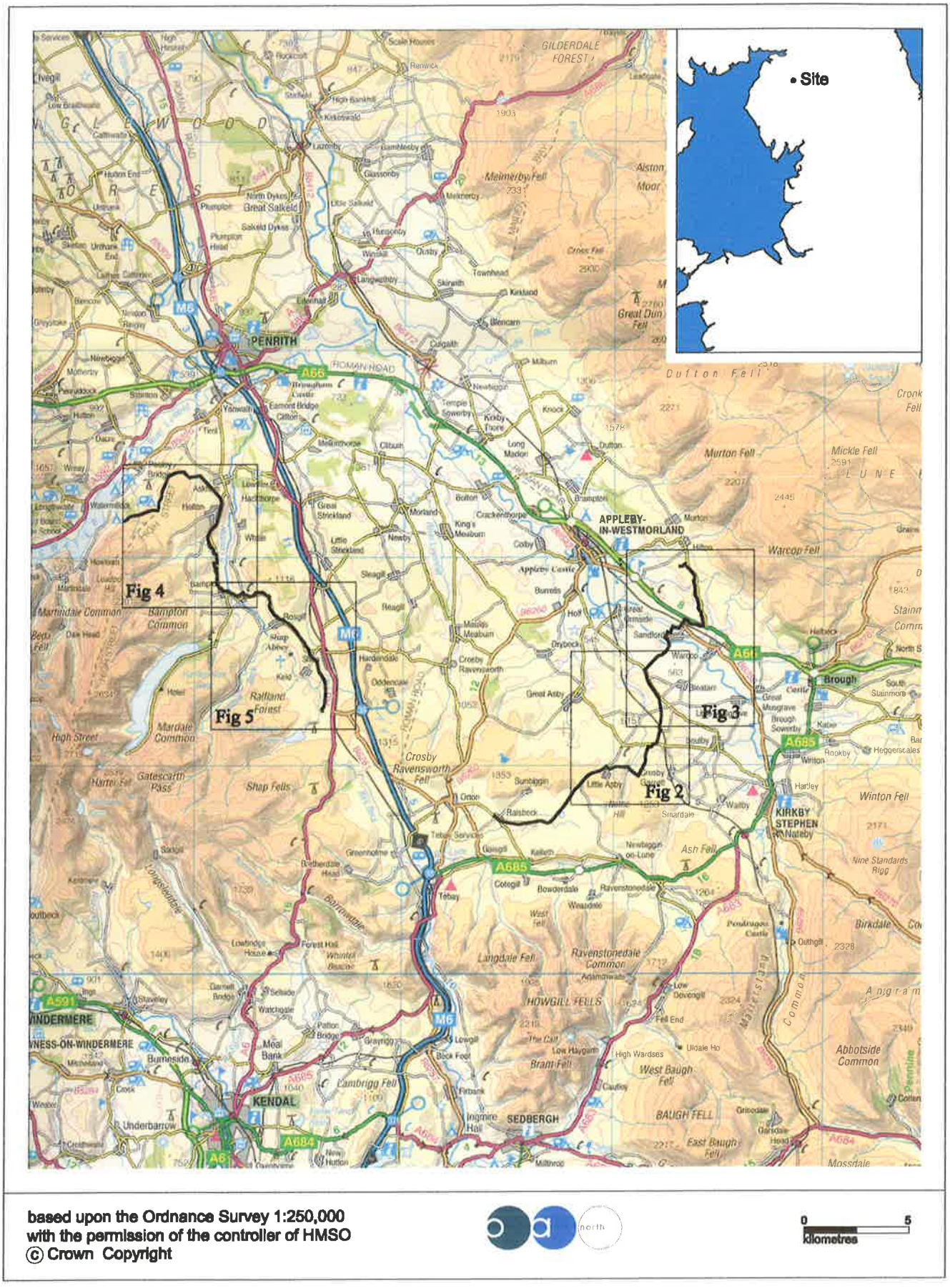

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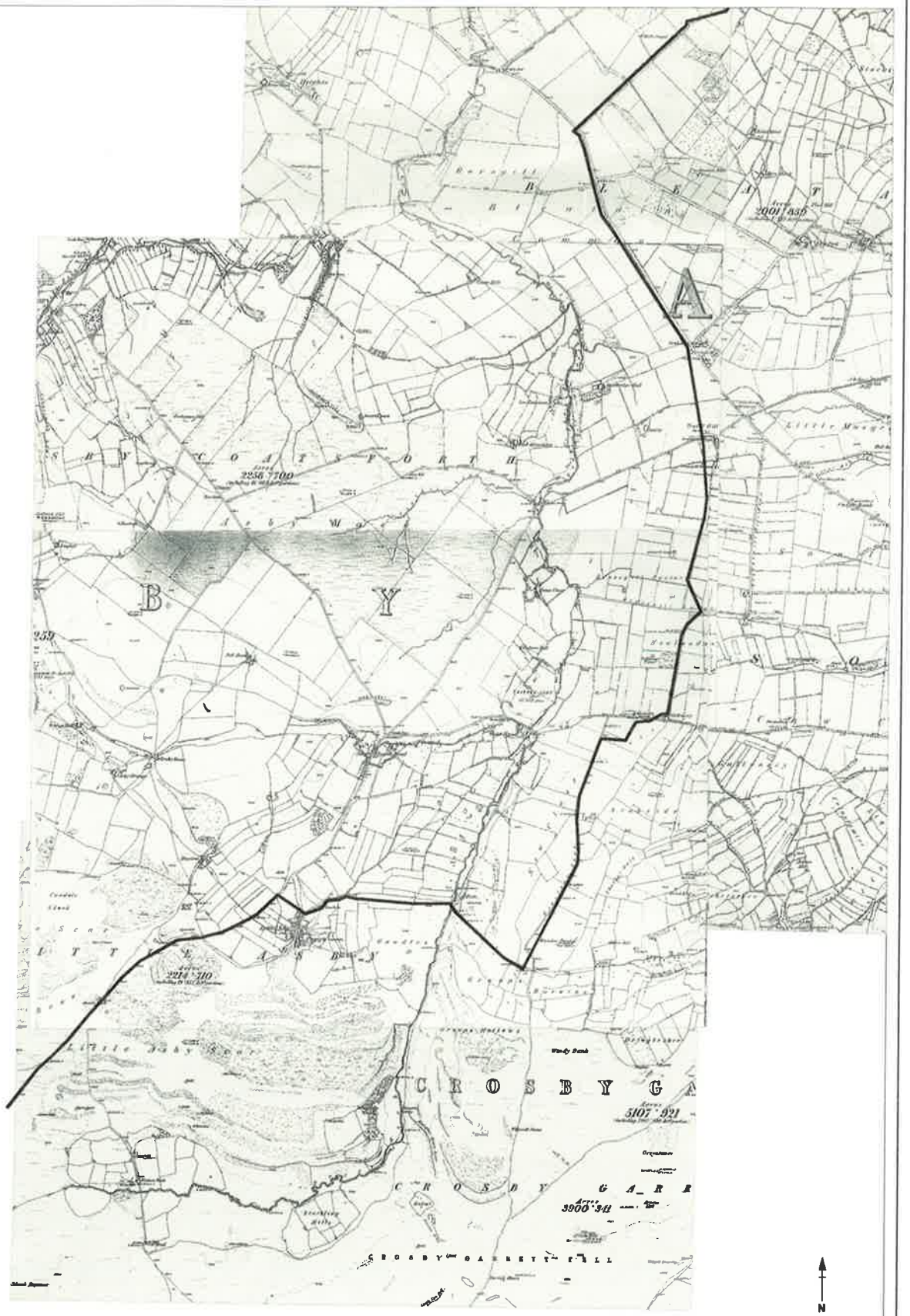
Figure 1: Location Map



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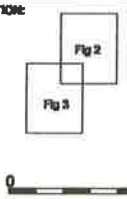
PROJECT:	Askham to Hayeswater, Cumbria
DRAWING No:	2
SCALE:	1:25,000
TITLE:	Section 2, 1st edition OS map
CLIENT	United Utilities
DRAWN BY:	AP/ELC
DATE:	November 2002

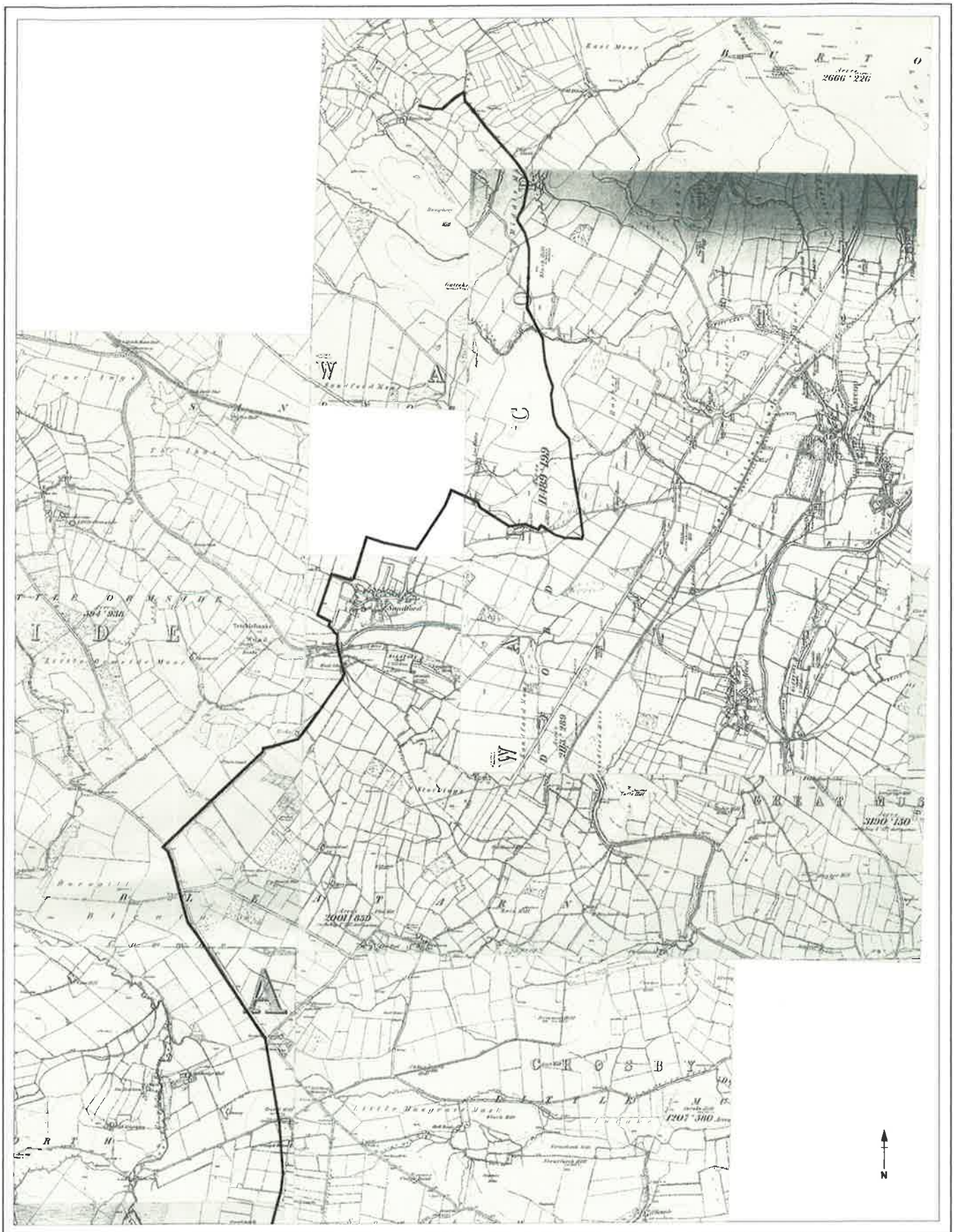
LOCATION:



KEY

Route of Pipeline

Figure 2: First edition OS map with the proposed pipeline route indicated along Section 1, Raisbeck to Bankwood - South



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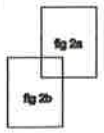
PROJECT:	Askham to Hayeswater, Cumbria
DRAWING No:	3
SCALE:	1:25,000
TITLE:	Section 1, 1st edition OS map
CLIENT	United Utilities
DRAWN BY:	AP/ELC
DATE:	November 2002

LOCATION:

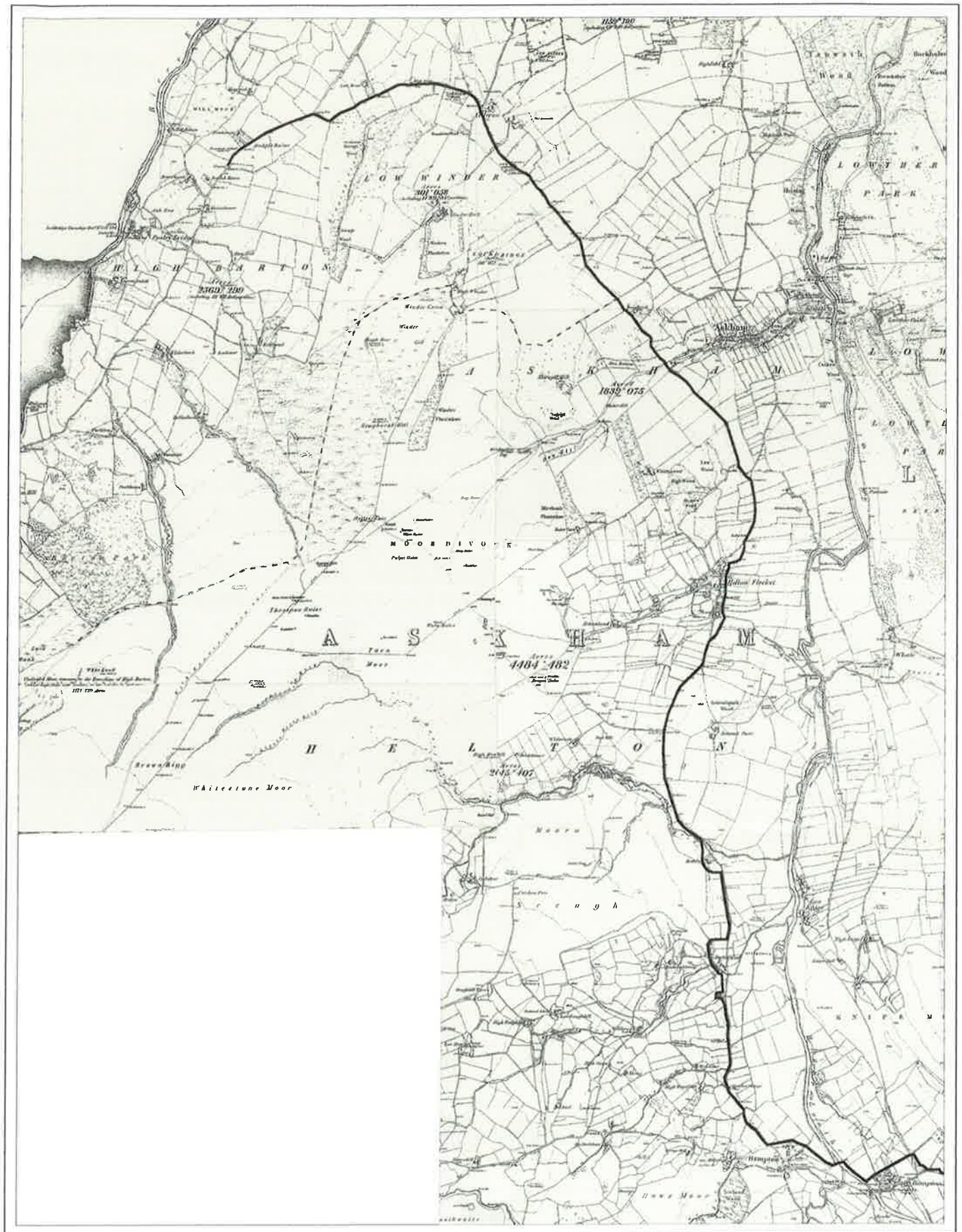


0 500m

KEY

Route of Pipeline

Figure 3: First edition OS map with the proposed pipeline route indicated along Section 1, Raisbeck to Bankwood - North



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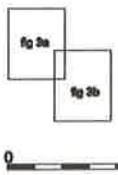
PROJECT:	Askham to Hayeswater, Cumbria
DRAWING No:	4
SCALE:	1:25,000
TITLE:	Section 1, 1st edition OS map
CLIENT	United Utilities
DRAWN BY:	AP/ELC
DATE:	November 2002

LOCATION:



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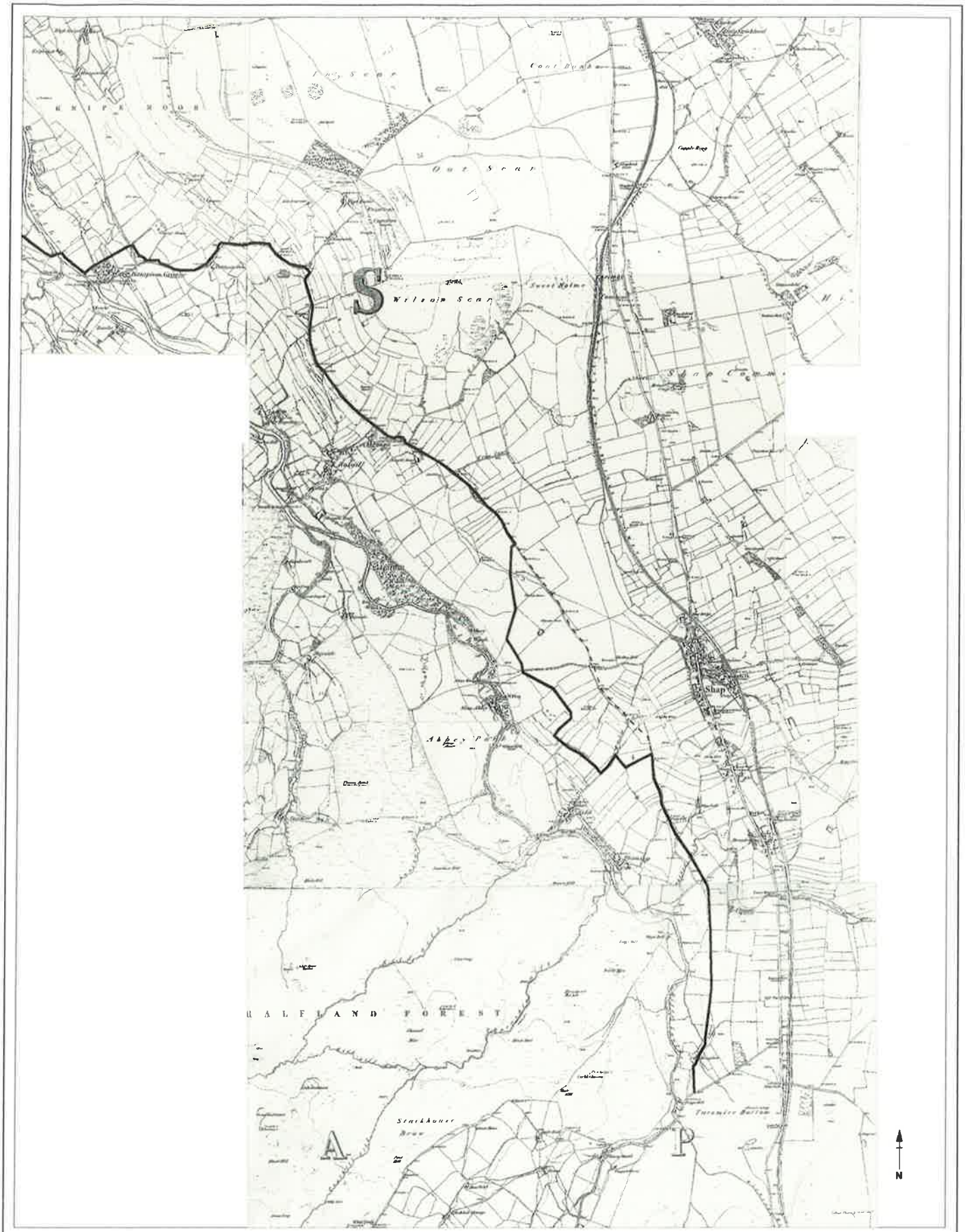
KEY

Route of Pipeline

Old Route

Figure 4: First Edition OS Map with the proposed pipeline route indicated along Section 2, Barton to Shap - North



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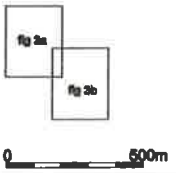
PROJECT:	Askham to Haweswater, Cumbria
DRAWING No:	5
SCALE:	1:25,000
TITLE:	Section 2, 1st edition OS map
CLIENT	United Utilities
DRAWN BY:	AP/ELC
DATE:	November 2002

LOCATION:



KEY

Route of Pipeline
Old Route

Figure 5: First Edition OS Map with the proposed pipeline route indicated along Section 1, Barton to Shap - South

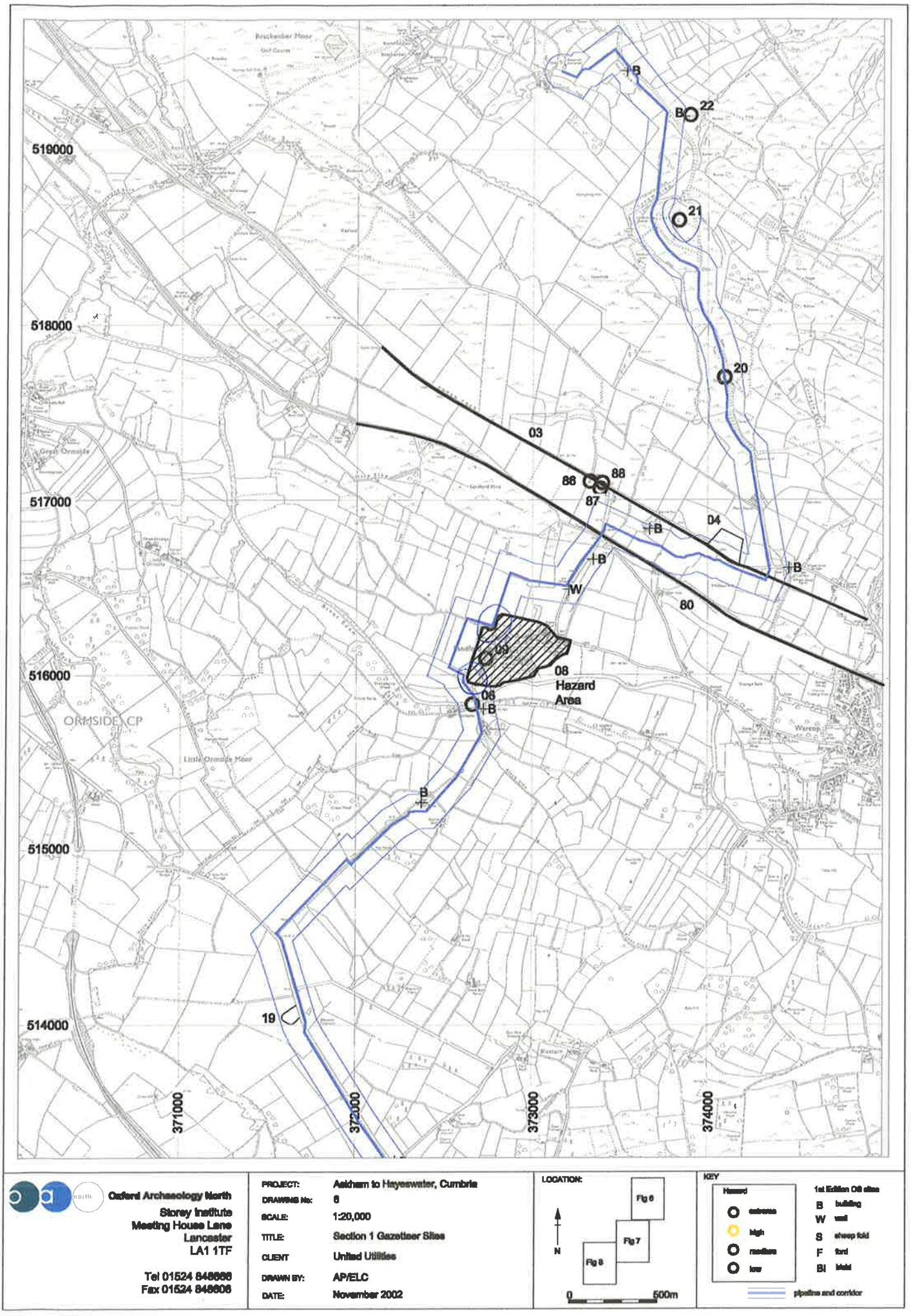


Figure 6: Section 1 Raisbeck to Bankwood, showing the proposed pipeline route, the gazetteer sites and sites noted from OS first edition map - North

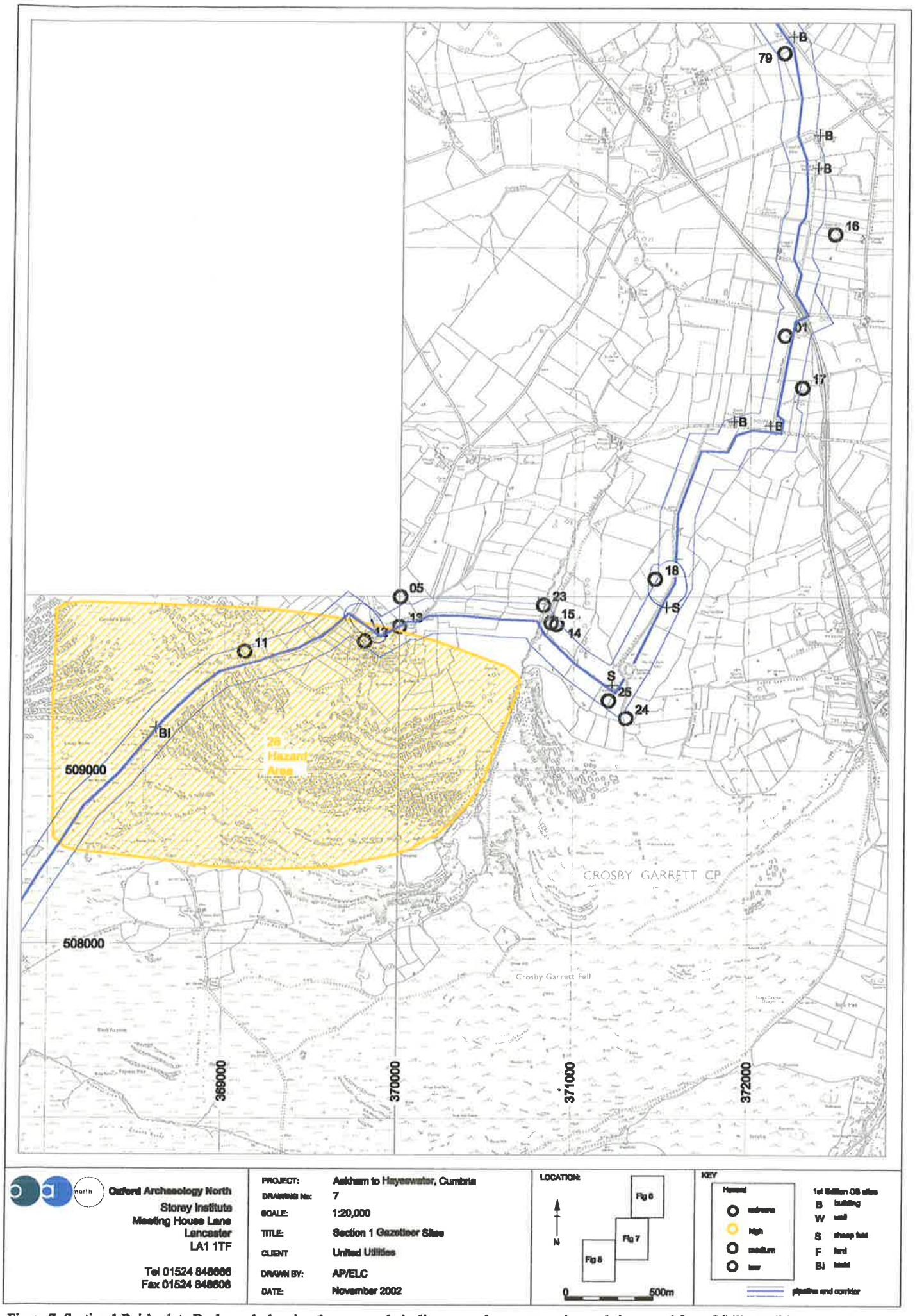
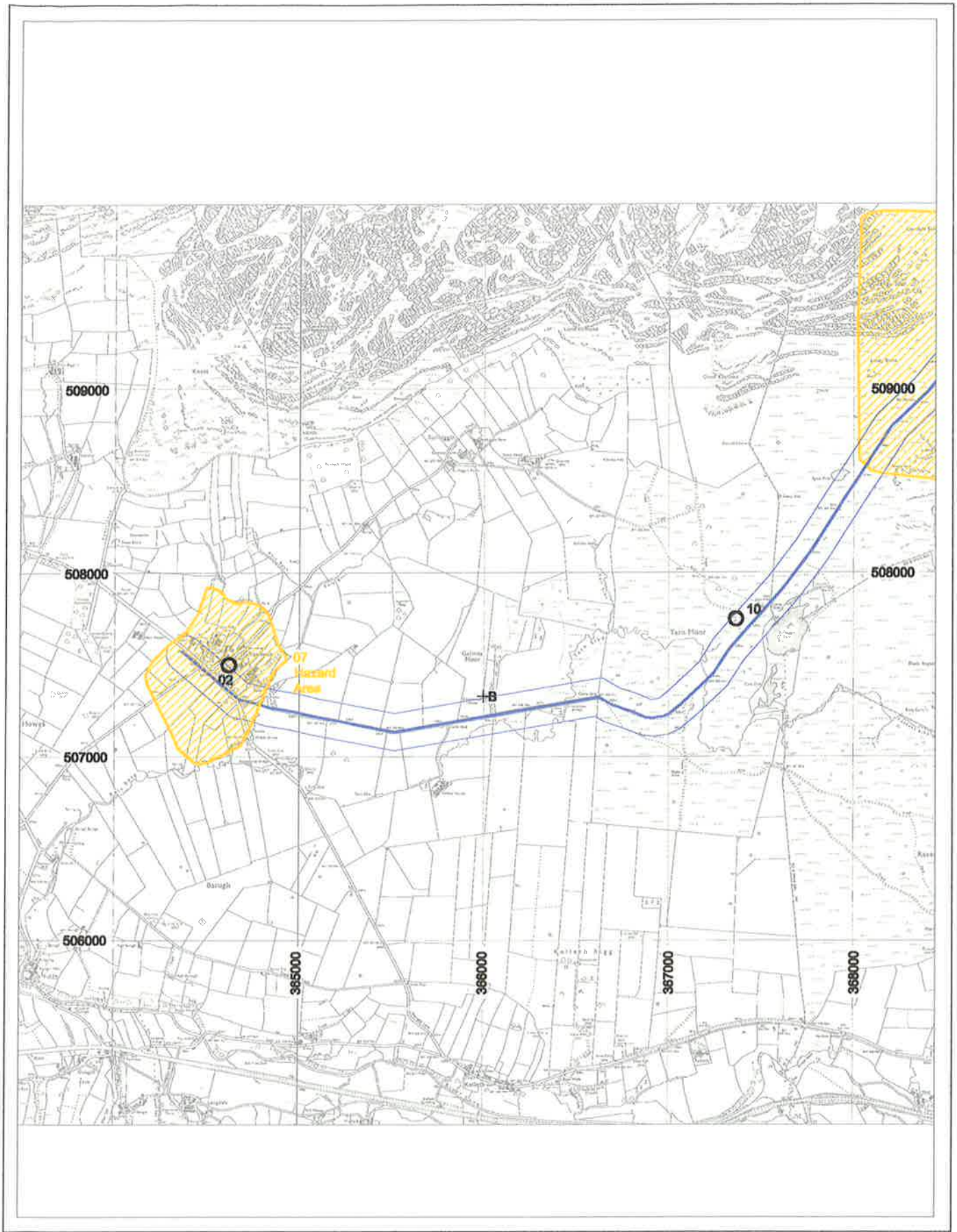


Figure 7: Section 1 Raisbeck to Bankwood, showing the proposed pipeline route, the gazetteer sites and sites noted from OS First Edition map - Central



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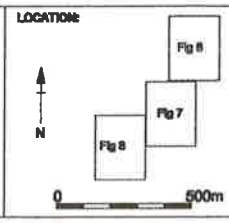
PROJECT:	Askham to Heysewater, Cumbria
DRAWING No:	8
SCALE:	1:20,000
TITLE:	Section 1 Gazetteer Sites
CLIENT	United Utilities
DRAWN BY:	AP/ELC
DATE:	November 2002

LOCATION:

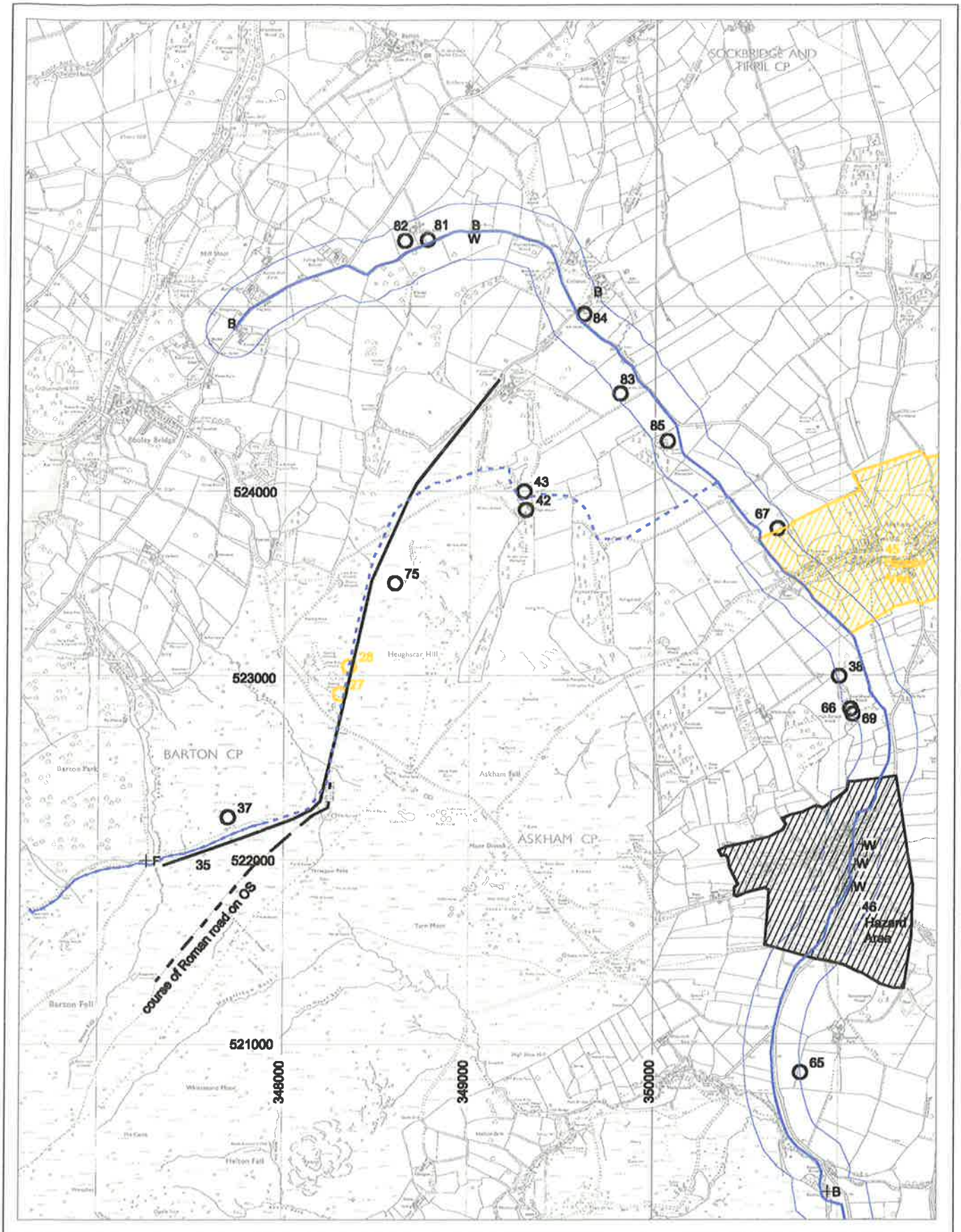


KEY

1st Edition OS sites
B building
W well
S sheep fold
F ford
BH tidal

pipeline and corridor

Figure 8: Section 1 Raisbeck to Bankwood, showing the proposed pipeline route, the gazetteer sites and sites noted from OS First Edition map - South



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PROJECT:	Askham to Heysewater, Cumbria
DRAWING No:	9
SCALE:	1:20,000
TITLE:	Section 1 Gazetteer Sites
CLIENT	United Utilities
DRAWN BY:	AP/ELC
DATE:	November 2002

LOCATION: Fig 9, Fig 10, Fig 11

0 500m

KEY

Hazard: extreme, high, medium, low

1st Edition OS sites: B building, W well, S sheep fold, F ford, BI bield

version 2 reroute

pipeline and corridor

Figure 9: Section 2 Barton to Shap map, showing the proposed route, the gazetteer sites and sites noted from the first edition OS map - North

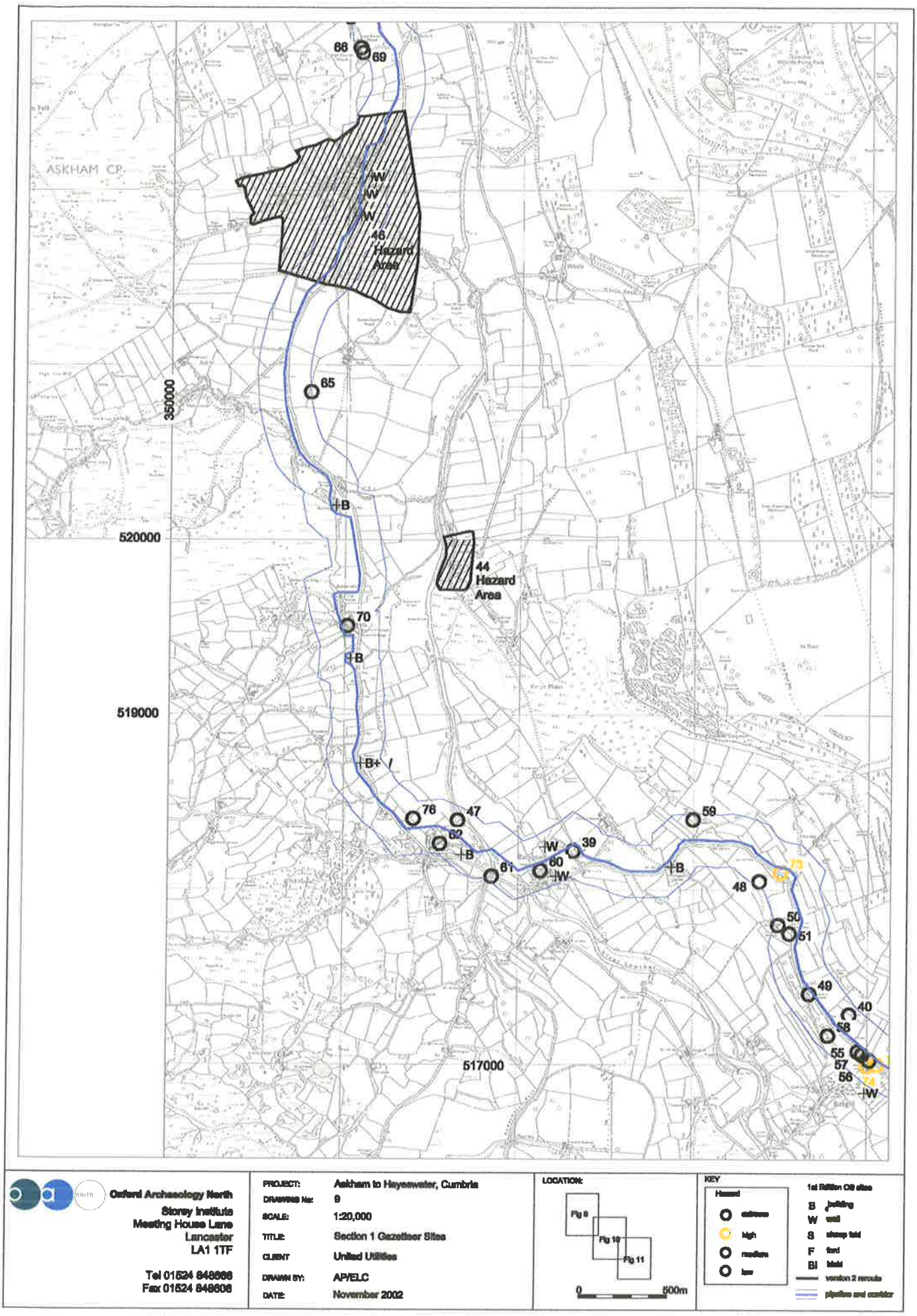

Figure 10: Section 2 Barton to Shap map, showing the proposed route, the gazetteer sites and sites noted from the first edition OS map - Central

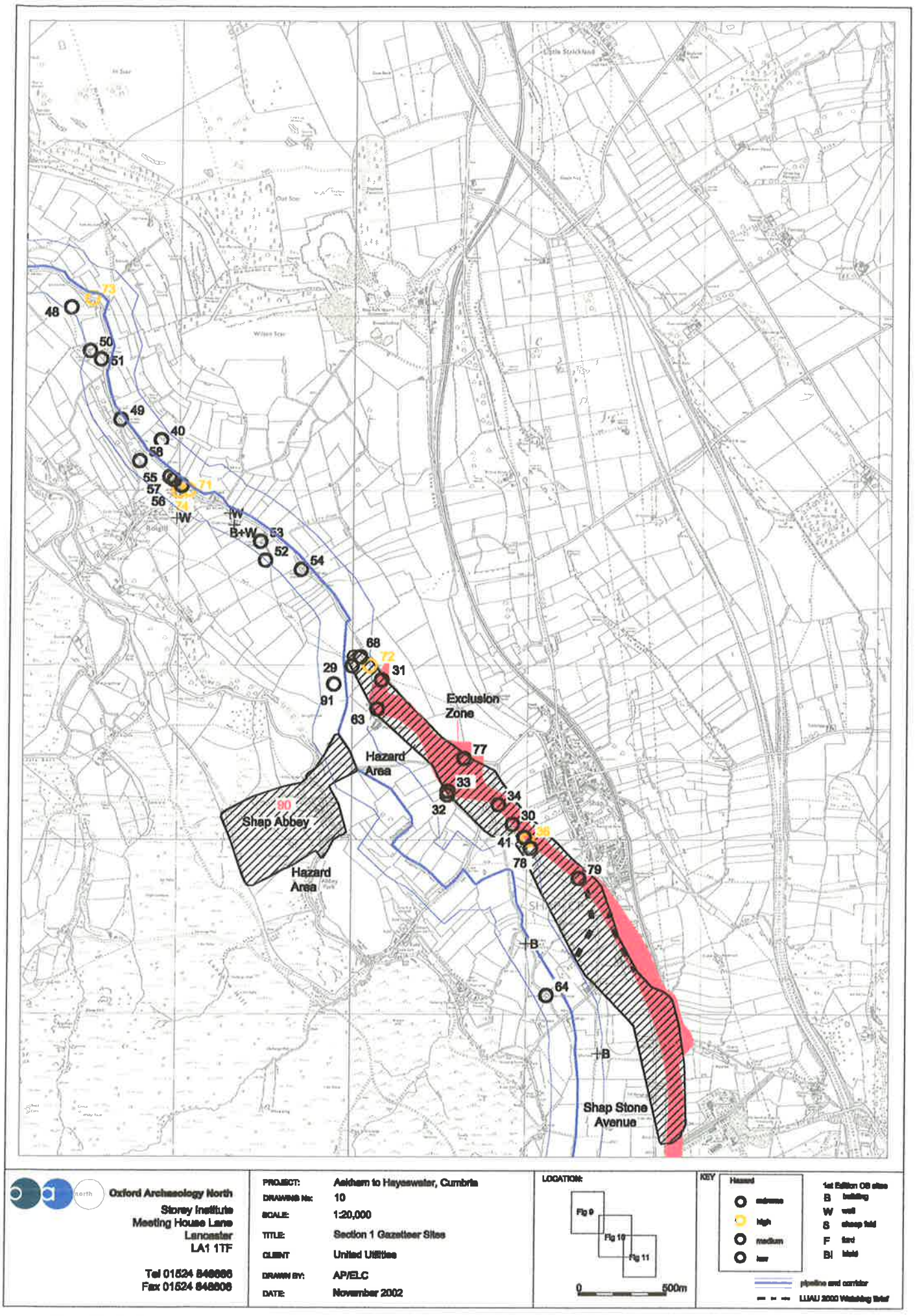

Figure 11: Section 2 Barton to Shap map, showing the proposed route, the gazetteer sites and sites noted from the first edition OS map - South

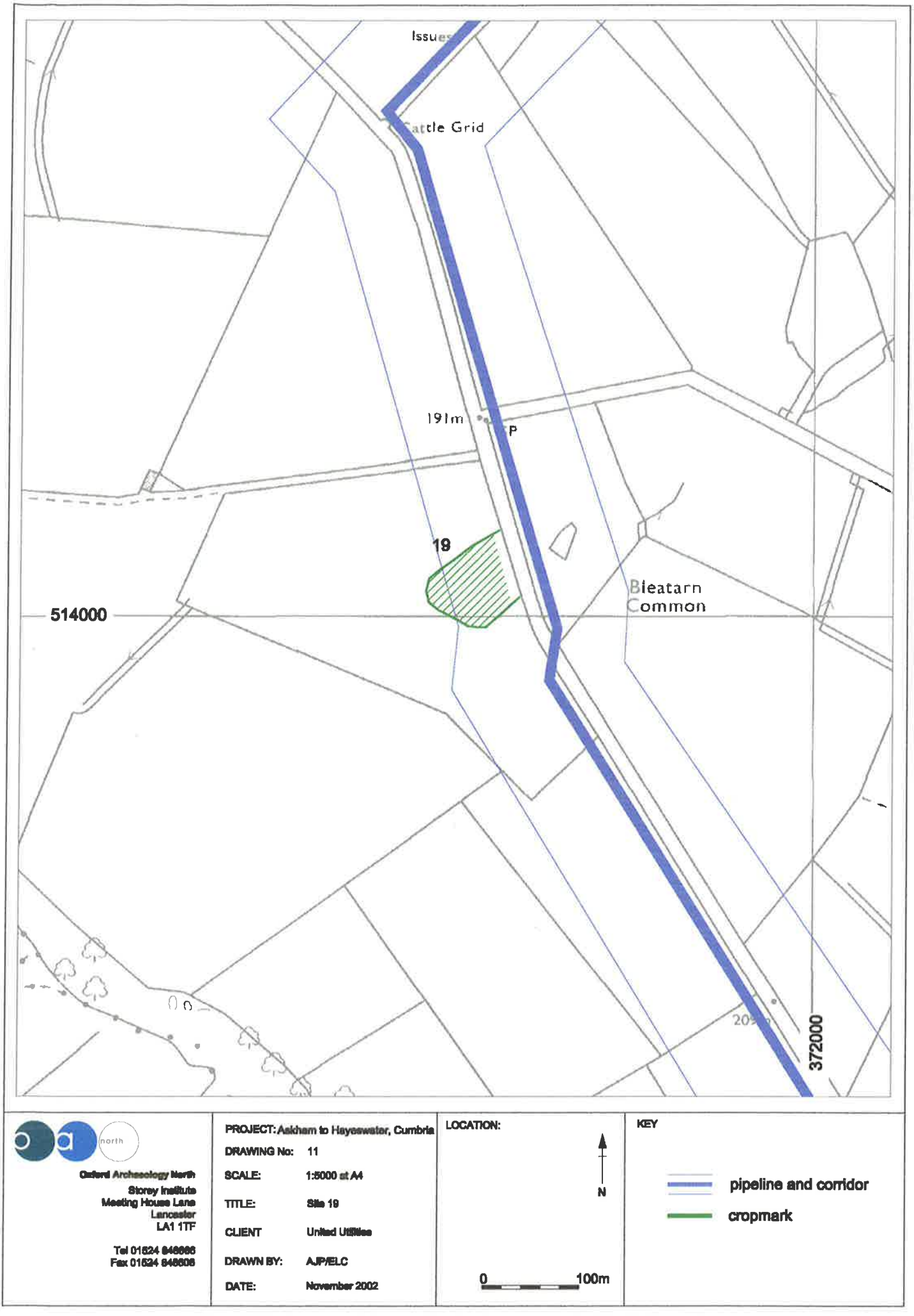

Figure12: Enlargement of the Map showing the Route past the Site 19 Cropmark