



SHAP TO WATCHGATE PIPELINE

Cumbria

Archaeological Appraisal and Walkover Survey Report

Second Revision

Oxford Archaeology North



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Prepared by:	Vix Hughes	Peter Schofield	Jo Cook
Position:	Project Supervisor	Asst. Supervisor	Research Asst.
Date:	May 2003	July 2003	July 2003
Checked by:	Jamie Quartermaine	Signed.....	
Position:	Senior Project Manager		
Date:	July 2003		
Approved by:	Emily Mercer	Signed.....	
Position:	Senior Project Manager		
Date:	July 2003		
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Oxford Archaeology (North)

Storey Institute
Meeting House Lane
Lancaster
LA1 1TF
t: (0044) 01524 848666
f: (0044) 01524 848606

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

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Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

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The desk-based study was undertaken by Vix Hughes. The walkover survey was conducted by Peter Schofield. The report was written by Vix Hughes, Peter Schofield, and Jo Cook and the drawings were produced by Emma Carter. The report was edited by Jamie Quartermaine and Emily Mercer. The project was managed 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 a proposed pipeline route in southern Cumbria. The section covered in this report extends from Shap, Cumbria, (NY 5615 1256) southwards along the line of the A6 to Watchgate, Cumbria (SD 5307 9815). The appraisal was undertaken in January 2003. In addition to the appraisal a walkover survey was conducted in July 2003 for the entire pipeline route, along with additional documentary appraisal for re-routed sections and an additional section of pipeline route, between Bleabeck Bridge and Salterwath Farm (NY 56877 09995 – NY 58300 09900)

The requirement of the study was for a rapid appraisal of the route. Consequently, the sources investigated were restricted to the Sites and Monuments Record (SMR), the OS First Edition maps, and a walkover survey, 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. This will, therefore, provide a basis for recommendations to protect the resource or provide appropriate mitigative measures.

From the SMR and walkover survey, seventy-nine sites were identified as being within a 200m corridor of the pipeline, one of which was identified as being a Grade II Listed Building and one was a Hazard Area.

The most significant sites identified are the possibly prehistoric cairnfield/enclosure (site 100) at Turnmire Bottom and the settlement/fieldsystem (Site 149) at Wasdale Foot.

The sites are rated according to their archaeological significance and status together with their rarity, condition, period and proximity to the proposed pipeline. In this way, it is recommended that sites with a high score necessitate the re-routing of the pipeline, whereas sites with a low score require little or no further action.

The recommendations are presented in tabular form. These seek to preserve *in situ* the resource where possible. If it is not possible to avoid the important sites then options for evaluation and recording as a preliminary to further recording, as mitigation are presented. Those sites of lesser importance can be recorded by means of a watching brief during the construction process.

The results show that the proposed pipeline will affect landscapes of archaeological importance. A re-route is recommended to avoid the High Borrow Bridge and Old Wasdale Bridge associated with the 1753 turnpike between Shap and Kendal. The pipeline route should be re-routed around the Wasdale Foot settlement (Site 149), and the undated earthworks at Tunnel Bridge (Site 140) and Salterwath Farm (Site 153). It is also recommended that an extensive evaluation of the northern section (Site 172) around Demings House (Site 155) is undertaken, particularly in the vicinity of the Shap Stone Avenue and the cairn enclosure complex. A small number of sites will need to be avoided within the 15m easement of the pipeline. A survey and watching brief should be conducted at the Turnmire Bottom cairnfield (Site 100) even though the line of a previous pipeline easement cuts the site and the new pipeline will follow the line of the earlier pipe.

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 a section of a proposed pipeline route in Cumbria (Fig 1). This section of the pipeline extends from the reservoir near Kemp Howe, Shap, at the northern end to the water works at Watchgate at the southern end (NY 5615 1256 - SD 5307 9815). As part of an ongoing water improvement scheme in Cumbria archaeological appraisals have been carried out to the north where a proposed pipeline passes through Shap to Bampton, as part of the Hayeswater project (OA North 2003), and to the south where a short stretch of pipeline has been completed from the Watchgate works to Garnett Bridge (OA North 2002b). The line of the pipeline is, for much of its length, either on or adjacent to the boundary of the Lake District National Park Authority. This appraisal was undertaken in January 2003. This report is an updated, second version of the original appraisal, undertaken in May 2003, and examines the same sources of evidence for several re-routed sections and an additional route between Bleabeck Bridge and Salterwath Farm (NY 56877 09995 – NY 58300 09900) (*Figure 4*), with the addition of sites identified in a walkover survey of Section 1.
- 1.1.2 **Rapid Appraisal:** United Utilities has requested at this stage a statement outlining the archaeological potential and impact of the proposed routes, as oppose to a detailed archaeological assessment. Consequently, 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 5.1*) examines the specific impact of the route on each of the known archaeological resources. The Recommendations Section (*Section 6.1*) suggests mitigation measures, including re-routing, to protect the archaeological resource. As a result of the first version of this appraisal report several areas of the proposed pipeline have been re-routed in order to minimise the impact on the archaeological resource. The addition of sites identified in the walkover survey and the appraisal of the new section of pipeline route between Bleabeck Bridge and Salterwath Farm has produced new impacts on the archaeological resource.
- 1.1.3 **Walkover Survey:** in addition a walkover survey was undertaken within the assessment corridor of the pipeline route (*Figures 4 and 5*) on unchanged original route sections, new re-routed sections and the new additional section. The walkover survey has identified 22 new sites. In total the appraisal for the second version of this report has identified 43 new sites.
- 1.1.4 All the information concerning archaeological sites within the assessed areas has been collated into a gazetteer, which provides details of the site 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 4 and 5*). 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 was submitted by OA North to United Utilities for an archaeological appraisal for this section of the pipeline from Shap (NY 5615 1256) to Watchgate Water Treatment Works (SD 5307 9815) examining a corridor of 200m width centred on the line of the proposed route extending over 15km. After the first version of the appraisal report a new section of proposed pipeline route was added between Bleabeck Bridge and Salterwath Farm (NY 56877 09995 – NY 58300 09900).
- 2.1.2 The project design was produced in accordance 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. Antiquarian accounts and numerous other sources and published works were also required 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) (CRO(K)). In addition to these sources a walkover survey of the proposed development assessment corridor was undertaken.
- 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. As the proposed route is either on or adjacent to the border with the Lake District National Park it was considered appropriate to consult the Cumbria SMR, rather than that maintained by the Lake District National Park Authority. 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, three 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) (CRO(K)):*** the First Edition OS maps were a published source of printed maps at a scale of 1:10,560 (Figs 2 and 3). They show

clear details and are regarded as accurate in both location and the nature of the material they represent.

2.3 WALKOVER SURVEY

- 2.3.1 A walkover survey was conducted by a suitably qualified archaeologist, additional sites were noted, described and accurately located. In addition previously identified sites within the assessment area were visited and their condition noted. The survey was conducted by walking 20m wide transects within the easement corridor of the proposed pipeline. The survey was undertaken as an enhanced Level 1 type survey (OA North 2002b). The survey aimed to identify, locate and record archaeological sites and features on the ground and involved four elements: reconnaissance, mapping, description and photography. The sites were located by means of differential GPS Survey which is accurate to $\pm 0.25\text{m}$.

2.4 ANALYSIS

- 2.4.1 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, enabling 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. A low score denotes a site of lower importance and normally remote from the pipeline, thus not directly impacted upon. The results are provided in Table 1. The Site Number refers to the site gazetteer and relates to Figs 4 and 5, 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
0	Modern
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
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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

- 2.4.2 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 Grade II Listed Building within the corridor. In the guidelines designated sites were given weighted scores: two points for a Hazard Area and five for a Scheduled Monument or a Listed Building of any grade. The resulting overall scores for individual sites ranged from 8 to 17 (see Table 1).
- 2.4.3 **Impact:** the major factor in determining the impact was the proximity of the monuments to the proposed pipeline. 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.
- 2.4.4 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.

2.5 ARCHIVE

- 2.5.1 The results of the rapid appraisal and walkover survey 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's 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 INTRODUCTION

- 3.1.1 A total of 80 sites were identified during the rapid appraisal and the walkover survey. They fall broadly into the categories listed in table 1 below, described in the order of their frequency within the study corridor:

Site Type	Number of Sites	Site Numbers
Field System	1	174
Kiln	1	119
Railway	1	137
Tenter grounds	1	135
Barn	2	121, 144
Standing Building	2	116, 120
Settlement	3	100, 149, 179
Earthworks	3	140, 147, 153
Farm	3	124, 129, 132
House or site of	3	101, 177, 178
Mill	4	103, 128, 133, 134
Water management	4	122, 126, 127, 139
Boundary or enclosure	5	146, 154, 156, 157, 173
Cairn	5	102, 141, 142, 148, 170
Ruined Building	5	130, 131, 155, 158, 171
Road or track	6	123, 136, 152, 164, 169, 172
Structure	7	143, 160, 162, 165, 166, 167, 168
Bridge or fording point	9	105, 110, 111, 115, 138, 150, 151, 159, 176
Quarry or Gravel Pit and/or workings	15	104, 106, 107, 108, 109, 112, 113, 114, 117, 118, 125, 145, 161, 163, 175

Table 1: Sites identified during the rapid appraisal and walkover survey.

3.2 SITES AND MONUMENTS RECORD (SMR)

- 3.2.1 A large proportion of the sites within the site gazetteer were from the SMR which consisted of forty-two sites and areas. These were compiled as a result of a search on a 200m corridor centred on the alignment of the proposed pipeline. Thirty-six sites were identified in the initial appraisal and an additional seven sites were identified in the appraisal for the new section of proposed pipeline route. The sites retrieved from the SMR are specific to the alignment. 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 forty-three SMR entries, one was identified as a Hazard Area (Site 174, *Figure 4*) and one was identified as a Listed Building (Site 120, *Figure 5*).
- 3.2.2 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
Cairns	1	102
Kiln	1	119
Spoil Heaps	1	175
Tenter Ground	1	135
Field System	1	174
Enclosure	1	173
Farms	2	129 and 132
Settlements	3	100, 149 and 179
Structures / Sites of	4	101, 130, 131 and 177
Standing Buildings	4	116, 120, 121 and 124
Mills	4	103, 128, 133 and 134
Water Management	4	122, 123, 126 and 127
Fording points	5	105, 110, 111, 115 and 176
Quarries	11	104, 106-109, 112-114, 117, 118 and 125

Table 2: Sites identified from the SMR

- 3.2.3 The majority were post-medieval in date, totalling twenty-two sites (Sites 103-121, and 175-177). In addition, six were modern (Sites 122-127); one was medieval to post-medieval (Site 102); one was medieval (Site 101); one was prehistoric or possibly medieval site (Site 100); two were prehistoric or possibly Romano-British (Sites 149 and 179) and the remaining ten were of unknown date.
- 3.2.4 The aerial photographs examined did not reveal any further sites other than those already included within the SMR.

3.3 ORDNANCE SURVEY (OS) MAPS

- 3.3.1 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 1858-59 and for the most part were then in current use (OS First Edition 1863). 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 4 and 5). These included ten buildings and isolated dwellings, one well, one sheepfold, one limekiln, two bridges and a topographical placename.
- 3.3.2 Of the ten buildings noted on the OS maps, all 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 well at Wickersgill / Turnmire Bottom is no longer depicted although the area is now shown as a disused quarry and the well may therefore have been destroyed. The adjacent limekiln formerly shown on the OS First Edition may potentially survive, albeit in a severely decayed state. The sheepfold is no longer shown but again may still be present in the field. The two bridges, at Kidshowe and Wasdale, are still shown as is the placename Packhorse Hill.
- 3.3.3 It is highly unlikely that the pipeline will directly affect any of the buildings but, considering that most are located along an established routeway, there is the

potential for them being long-lived and remains associated with them could survive in the immediate area.

- 3.3.4 For the purposes of this second revision to the report an interrogation of the OS First Edition mapping for the additional proposed pipeline route (*Figure 4*), and for re-routes to the original proposed development routes was conducted. This has led to additional archaeological sites being recognised. All the fifteen new sites were given gazetteer numbers and visited on the walkover survey to identify their present condition.

Site Type	Number of Sites	Site Numbers
Railway	1	137
Ruin	1	155
Enclosure Wall	1	157
Trackway	1	164
Turnpike	2	136 and 172
Buildings	2	158 and 178
Sheepfold	2	160 and 162
Mile Posts	2	166 and 167
Bridges	3	150, 151 and 159

Table 3: Sites identified from the OS First Edition maps

- 3.3.5 The most significant new sites identified on the OS First Edition are the transport routes. Two sections of the 1753 turnpike road (Sites 136 and 172) will be impacted by the proposed pipeline, and occurs where it diverges from the later 1826 turnpike and the modern A6. The railway line (Site 137) runs close to the north end of the proposed pipeline corridor and is crossed by the new additional proposed pipeline route at Salterwath Farm on the extreme east end. There are also three other new transport sites, including part of a trackway at Nab End (Site 164), and two mileposts associated with the 1826 turnpike (Sites 166 and 167) at Lowbridge Lodge and North Gateside Farm.
- 3.3.6 A site of some significance is Demings House (Site 155) located on the east side of the 1753 turnpike (Site 172) to the south of enclosures on Demings Moss. The site is already ruinous on the OS First Edition mapping, although the boundary bank on the side of the turnpike (Site 156) has an entranceway into the yard of the building. To the north of Demings House on the north-west slope of Packhorse Hill, is a small sheepfold (Site 162) that could be associated with the former site.
- 3.3.7 The rest of the sites identified are all post-medieval in period. This includes the roofed building, the sheepfold and enclosure wall (Sites 157, 158 and 160) within the enclosed lands of House Foot Farm in Crookdale. Also the bridges for access to Salterwath Farm, Old Shap Wells Hotel and the High Borrow Bridge Farmstead (Sites 150, 151 and 159). And finally the site of Old Shap Wells cottage (Site 178), within the grounds of the hotel, to the east of the railway embankment.

3.4 WALKOVER SURVEY

- 3.4.1 The walkover survey identified a further twenty-two new sites not listed on the SMR or on the OS First Edition mapping. The walkover survey also provided information on the current condition of all the documentary sites within the re-routes to the proposed pipeline route; the additional proposed pipeline section and remaining sections of unchanged proposed pipeline route. Of the twenty-two new sites, sixteen were identified as being at medium risk, and six as low risk.
- 3.4.2 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
Bridge	1	138
Weir	1	139
Building Platform	1	143
Trough	1	165
Sheepfold	1	168
Buildings	2	144 and 171
Trackways	2	152 and 169
Earthworks	3	140, 147 and 153
Quarries	3	145, 161 and 163
Boundary Banks	3	146, 154 and 156
Cairns	4	141, 142, 148 and 170

Table 4: Sites identified by the walkover survey

- 3.4.3 The majority of the sites identified (12) are post-medieval or modern in period, of the others eight are undated and two are prehistoric (Sites 143 and 148). Site 143, a possible prehistoric building platform, is closely associated with site 100, identified in the SMR. It is possible that together they form a larger prehistoric, or possibly roman feature. Similarly, settlement site 149 is close to site 148, a cairn and they may also form part of a larger prehistoric complex.

4. ARCHAEOLOGICAL POTENTIAL

4.1 PREHISTORY

- 4.1.1 There is little information on the prehistory of the immediate study area, but it falls in a wider area of known archaeological potential. However, the fact that five prehistoric sites (100, 143, 148, 149 and 179) along with other earthworks of unknown date that are potentially prehistoric (site 174) implies that there is high archaeological potential within the study corridor.
- 4.1.2 Furthermore, at the northern end of the route in the marginal uplands and valleys of the Shap area there is evidence of activity since at least the Neolithic period and potentially even earlier. The main Neolithic remains in the vicinity of the study area is the Shap Stone Avenue which is dated to the late Neolithic period by analogy with more securely dated monuments (Clare 1978). The site is a Scheduled Monument and includes fourteen individual stones in the Shap area, but there were certainly more which have not survived. The extant section is 3km long (Burl 1993, 47) but may extend to both the north and south as a sub-surface feature. Antiquarian accounts (Nicholson and Burn 1777; 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 also suggest that there may have been three avenues (double rows of stones) centred on the Shap area, one aligned north-west to south-east by Skellaw cairn, one north-west of Knipe Scar and the third aligned north/south to be south of Shap and orientated towards the 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. A continuation of the line at 700m south from the observed limit of the avenue coincides with the line of the pipeline.
- 4.1.3 At the southern end, to north of Kendal, there are far fewer indications of Neolithic activity. There are restricted surprisingly to few stone axe finds but includes one found with a quern at Whitwell Folds, to the east of the assessment area (Cowper 1888).
- 4.1.4 The Iron Age is not well represented in the study area, although multivallate hillforts are known from the surrounding region at Castlesteads to the south of Kendal (Bingham 1995).

4.2 ROMAN

- 4.2.1 No confirmed sites from the Roman period have been identified within the assessment area. The nearest Roman forts are at Watercrook in Kendal, over 8km

beyond the southern end of the route, and Low Borrowbridge, 6km to the east. The occupation of the fort at Watercrook began around AD 90-5 with the construction of a turf and clay rampart (Shotter 1984). It went through several fluctuating phases of rebuilding and abandonment (Potter 1979), until it was finally abandoned by the military early in the fourth century (LUAU 1993).

- 4.2.2 The origin of the fort at Low Borrowbridge is more uncertain and may have been constructed during the late first to early second centuries (Shotter 1997). It appears that the Romans had little direct impact on the assessment area, although the creation of the fort at Watercrook was part of a wider policy of consolidation of Roman authority in the north-west of England involving the creation of a network of forts linked by roads (*ibid*). It is quite possible that for many of the indigenous population there was little settlement change in the area after the arrival of the Romans (Clare 1981) and that earlier settlements continued in use throughout the Roman occupation. However, the possibility of remains dating to the Roman occupation being discovered cannot be ruled out as the full extent of the Roman influence on the countryside surrounding Kendal is not yet known. Rollinson (1996) suggests that there must have been a road that linked the fort at Watercrook to that at Low Borrow Bridge and, if so, it probably passed close to the southern end of the proposed pipeline. 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.
- 4.2.3 The additional proposed pipeline route (*Figure 4*) assessed in this second revision of the report, runs east to the south of Blea and Trundle Becks. It is here on the gently sloping east side of Wasdale Fell that several settlements, with enclosures and field-systems have been documented. Two of the settlements lie within the assessment corridor, site **149** has possible Iron Age/Romano-British enclosures and field-systems and site **174** has similar (but undated) enclosures and field-systems.

4.3 EARLY MEDIEVAL

- 4.3.1 As is the case throughout Cumbria, evidence for early medieval activity from excavations and surviving remains is extremely limited and there is often a reliance on place-name evidence to provide indicators of activity through this period. Following the cessation of organised Roman military occupation in Britain, most of Cumbria, became part of one of the rapidly fluctuating early medieval kingdoms: firstly Rheged in the sixth and seventh centuries and then the expanding and quarrelsome kingdoms of Northumbria and Strathclyde (Higham 1986, Bingham 1995).
- 4.3.2 The presence of a putative monastic site at Dacre (Newman and Leech forthcoming) and of proto-urban centres at Carlisle (McCarthy 1990) and Penrith (Newman *et al* forthcoming), suggests well-established agricultural hinterlands associated with settlement. Evidence for rural settlement is also beginning to emerge at sites such as Fremington, 3km south-east of Penrith (Oliver *et al* 1996, 127-169), Bryant's Gill in Kentmere (Dickinson 1985) and at Shap itself (Heawood and Howard-Davis 2002).

4.4 MEDIEVAL

- 4.4.1 **Conquest:** none of the sites identified in the rapid appraisal or walkover appeared pre or post-Conquest in origin, although it would appear that Norman centres were established in the area around Kendal shortly after the Conquest. It was not until 1092 that the Normans were able to take full control of Cumbria (Bingham 1995), and it appears that the political divisions were based on already existing entities (Winchester 1987). The majority of the lands within the region were granted to a new Norman overlord, Ivo de Taillebois who, in his time, helped to establish many of the parishes of south Westmorland with gifts of land (Bingham 1995). Close to the south end of the route and immediately to the east are Whitwell and Selside Hall. These are known to have existed in the fourteenth century and were in existence in the seventeenth century, both associated with deer parks at this time. Nicolson and Burn (1777) describe the Whitwell deer park as still in use and it appears on Jefferys' map (1770) but by Hodgson's map of 1828 it was no longer named and the Ordnance Survey (1863) only refers to it as 'Site of'. The deer park at Selside Hall has a similar history (Ewbank 1963). The associated villages of Whitwell and Selside are mentioned in fourteenth century documents but nothing remains of them today (RCHME 1936).
- 4.4.2 The Thornburgh family united Whitwell and Selside townships in the fourteenth century (Nicolson and Burn 1777) to form a single manor. This was a time of consolidation of the central government but it was also a time of great poverty. The Scottish raids had badly affected Cumberland, Westmorland and even North Lancashire and a 'murrain' of cattle and sheep was seriously damaging the economy of the area (Winchester 1987). There were also two major outbreaks of the plague, between 1352 and 1362 which only added to the already immense problems (*ibid*). This may have accounted for the abandonment of the settlements at Whitwell and Selside. The region did eventually recover, and there was further agricultural expansion in the following centuries (*ibid*).
- 4.4.3 **Later Medieval:** unlike previous sections of the proposed pipeline routes which have been assessed, this section has very little surviving evidence of medieval settlement in the vicinity. In particular there are no known medieval villages, which are characteristic of other parts of Cumbria and no surviving evidence from early cartographic sources of fossilised field boundaries indicating agricultural landuse. This relative lack of early agricultural land organisation would appear to be a direct result of the topography of the area. Much of the land is fellside and as such of limited value as arable land with most of it being used for sheep grazing (indicated by a name like Lamb Pasture, near Wolf Howe). The few areas of demarcated fields are probably of more recent origin.
- 4.4.4 At the northern end of the route Shap Abbey, founded in the late twelfth to early thirteenth centuries, probably had some influences. 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. At its most populated, the Abbey housed only twenty Canons, although there may have been extra lay-members, but it is evident that it controlled much of the surrounding area. 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 (*op cit*, Section 6.6.18).

4.5 POST-MEDIEVAL

- 4.5.1 To the north of the area are numerous quarry sites and associated lime kilns, some of which survive in good condition. However, only one quarry and associated lime kiln was noted in the entire area. The majority of the quarries are located along the central part of the proposed route, south of Shap. 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 which had numerous 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 setting of the still functioning North-Western railway line (Site **137**) will be affected where it converges with the line of the pipeline near Shap. Although being of nineteenth century date, and therefore relatively recent, railway heritage is a significant part of the post-medieval development of Britain (Jones 1996, 300). Within the surrounding landscape, the embankments and cuttings of the railway and potentially the remains of the navvy camps which were occupied by those involved in the construction of the railways (*op cit*, 253), falls within the study corridor of the pipeline.
- 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 (Sites **136** and **172**) in 1753. Until 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 1997; Hindle 1998). 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.
- 4.5.4 A number of mills developed along the line of the turnpike exploiting the communication line and the abundant water supplies. In particular, great use was made of the River Sprint to the west of the southern end which was connected to the textile industry, producing bobbins in vast quantities and corn supplying flour to an ever-expanding population.
- 4.5.5 Most of these mills date to the early nineteenth century but there had already been an expansion in housing in the seventeenth century, particularly by upwardly mobile yeoman farmers (Rollinson 1996). Sites **124**, **130** and **132** were most probably a result of this, and in the case of Watchgate House (Site **120**), this may have resulted in the destruction, removal or rebuilding of a former watch house of unknown date (Smith 1967).

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 within the survey area to date, 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 seventy-nine sites within the gazetteer was assessed, both within a national context and within the context of the pipeline. For instance, the impact of the proposed pipeline alignment on one of the post-medieval limekilns cannot be regarded as the same as the impact upon for example the Neolithic Shap Stone Avenue (to the immediate north of the study corridor).
- 5.1.3 Table 1 attempts to classify and quantify the sites and the impact of the proposed scheme. The higher the score the higher the value of the site and the greater the impact. The methodology of the scoring system is presented in *Section 2.3.1*, and the overall results are presented below and graphically in Figs 4 and 5. The original data (thirty-six sites) for the proposed assessment corridor outlined in the first revision of this report has been retained, with the addition of forty-four new sites (Site 136-179) identified in the second revision of the report. The new sites include seven new SMR sites, fifteen new OS First Edition mapping sites and twenty-two new walkover survey sites. It should be noted that as a result of re-routing the following sites lie outside the 200m assessment corridor and will not be subject to any impact: Sites 107, 111, 112, 123-125, 129, 143, 162, 175, 178 and 179

Table 1: Assessment of impact of pipeline route on archaeological sites

Site Number	SMR Number	Period	Condition	Association	Rarity	Significance	Impact	Effect / Total
123	31702	0	3	3	1		0	7
124	31703	0	3	3	1		0	7
119	17863	1	1	2	2		2	8
125	31704	0	3	4	1		0	8
168		0	4	2	1		2	9
139		0	4	2	1		2	9
112	17079	1	3	4	1		0	9
162		3	3	2	1		0	9
107	17043	1	3	4	1		0	9
170		1	3	2	1		2	9
128	5139	3	1	2	1		2	9
178		1	4	3	1		0	9
175	5295	1	4	3	1		0	9
134	30805	3	1	2	1		2	9
177	17061	1	2	3	1		2	9
127	31707	0	4	3	1		2	10
158		1	3	3	1		2	10
135	30807	3	1	2	2		2	10
129	5140	3	3	3	1		0	10
143		4	3	2	1		0	10
122	31692	0	4	3	1		2	10
126	31705	0	4	3	1		2	10
171		1	2	2	1		4	10
176	14847	1	3	3	1		2	10
111	17078	1	4	4	1		0	10
110	17077	1	2	4	1		2	10
163		1	3	3	1		2	10
165		1	4	2	1		2	10
157		1	2	2	1		4	10
103	14825	1	3	3	1		2	10
133	30800	3	2	3	1		2	11
141		3	3	2	1		2	11
102	31708	2	3	2	2		2	11
113	17084	1	3	4	1		2	11
108	17045	1	3	4	1		2	11
164		1	4	3	1		2	11
150		1	4	3	1		2	11
155		1	2	3	1		4	11
106	17042	1	3	4	1		2	11
131	5189	3	2	2	1		4	12
101	5143	2	1	3	2		4	12
121	31701	1	4	2	1		4	12
145		1	3	3	1		4	12
156		1	3	3	1		4	12
153		3	3	3	1		2	12
160		1	4	2	1		4	12
161		1	3	3	1		4	12
146		3	2	2	1		4	12

Site Number	SMR Number	Period	Condition	Association	Rarity	Significance	Impact	Effect / Total
154		1	3	3	1		4	12
166		1	4	2	1		4	12
167		1	4	2	1		4	12
169		1	3	3	1		4	12
140		3	3	3	1		2	12
173	3517	3	3	3	1		2	12
116	17092	1	2	4	2		4	13
109	17046	1	3	4	1		4	13
104	14830	1	3	4	1		4	13
159		1	4	3	1		4	13
172		1	2	4	2		4	13
114	17089	1	3	4	1		4	13
144		1	4	3	1		4	13
132	5191	3	3	2	1		4	13
142		3	3	2	1		4	13
117	17098	1	3	4	1		4	13
130	5141	3	2	3	1		4	13
151		1	4	3	1		4	13
152		3	2	3	1		4	13
136		1	2	4	2		4	13
118	17553	1	3	4	1		4	13
179	8326	4	3	4	2		0	13
138		1	4	4	1		4	14
115	17090	1	4	4	1		4	14
105	17070	1	4	4	1		4	14
137		1	4	4	1		4	14
148		4	4	2	1		4	15
174	16546	3	3	4	2	Hazard Area	2	16
147		4	4	3	2		4	17
100	4281	4	3	4	2		4	17
149	1940	4	3	4	2		4	17
120	19019	1	3	3	1	Listed	4	17

Table 5: Defined impacts upon the identified sites

5.2 PREDICTED IMPACT 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 subsequently 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: 100, 101, 104, 105, 109, 114-118, 120, 121, 130-132, 136-138, 142, 144-149, 151-153, 154-157, 159-161, 166, 167, 169, 171 and 172. Therefore forty sites out of the eighty in the gazetteer may be directly affected by the construction of a pipeline along the current proposed routes. The most important two sites are the putative settlements. Firstly the cairnfield and enclosure identified at the northern end of the route at Turnmire Bottom (Site 100), which is after the walkover survey is now seen to extend both to north and south of the line of the proposed pipeline route. The site has already been surveyed (Hart, 1985, *Figure 6.2*). The site is cut by a previous pipeline development (Cherry and Cherry, 1987, *Figure 4*) and the exposed area has been fieldwalked, which discovered over two thousand flints in a 350m area. It is proposed that the new pipeline should follow the line of previous disturbance. The second important site is the enclosure and field-system settlement (Site 149) located to the west of Old Shap Wells Hotel, which will be cut by the proposed pipeline route. In the same area is the putative Bronze Age burnt mound (Site 147) which is close to the line of the proposed pipeline to the south of the Old Shap Wells Hotel enclosed land.
- 5.2.4 The construction works should, if possible, avoid any standing structures such as sites 116, 120, 130, 131, 137, 138, 144, 151, 155, 159, 160 and 171, which are in the proximity of the pipeline and due to their localised nature can be avoided during the course of the works. The more extensive quarry sites, such as Sites 104, 109, 117, 118 and 145, may be impacted by the pipeline. The farmsteads of Sites 121, 124 and 132 are within an area of historic enclosure that will be affected and Sites 146, 152, 154, 156, 157 164 and 169 are associated trackways and enclosure banks that have the potential to be affected by the pipeline. With these monuments the pipeline would result in damage to the monuments and their settings and would mean that the surviving remains would lose their overall integrity.
- 5.2.5 Sites 136 and 172 are the line of a now detrunked turnpike; built from 1753 it was one of the earliest turnpikes in the country and the earliest north/south road between Shap and Kendal (Hindle 1998). The proposed pipeline will extend along the line of the turnpike road and will impact the fabric of the road and potentially impact the associated components such as the High Borrow Bridge and Wasdale Old Bridge

(Sites 110 and 105). The restrictions in re-routing the pipeline route around Bannisdale Road Bridge (Site 115) can be overcome. The bridge is of lesser importance compared to bridges on the earlier 1753 turnpike and the bridge could withstand the laying of the pipeline within its structure (the archway is remote from the road surface and the drain within the road is over 0.5m deep). Sites on the line of the 1826 turnpike that are important however are the two mile posts (Sites 166 and 167) although these should be easily avoidable.

- 5.2.6 The line of the Oxenholme to Shap railway (Site 137) will be affected to the west of Salterwath Farm, although it should utilise a bridge for access. Sites such as the cairns and mound (Sites 141, 147 and 148) are also likely to be subject to limited impact, because of their localised nature and should therefore be avoided during the course of works. The more extensive earthwork sites including those at Tunnel Bridge and Salterwath Farm (Sites 140 and 153), along with the site of a possible medieval house (Site 101), may contain additional earthworks or buried remains which would be damaged, and this would mean that the surviving remains would lose their overall integrity.
- 5.2.7 **Effects on Potential Sites During Construction:** the predicted effects on the archaeological resource which have not yet been identified are likely to range from the complete destruction of below and above ground archaeological features to minor damage, together with 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 northern part of the pipeline coincides with the extended line of the Shap Stone Avenue, the confirmed southernmost extent of which is only 700m to the north of the pipeline. This raises the possibility that if the sub-surface remains of the stone avenue extend further south than the surface expression of the monument there is the potential for an impact with the pipeline. There is also the potential for prehistoric agricultural landscapes, such as cairnfields, which have been found extensively across the area (Turner 1991), and is reflected in the putative enclosures and cairns in the northern part of the route (Sites 100, 149, 174 and 179).
- 5.2.8 The results of the present study indicate that the archaeology within the proposed corridor may encompass sites and deposits of all periods and it is possible that significant unknown archaeological remains may be encountered. Due to the fragmentary nature of their occurrence, any damage or destruction to any archaeological remains could potentially be a major loss.
- 5.2.9 **Residual Effect:** the predicted effect of the construction works is the likely destruction of the archaeological resource. Where the mitigation process is implemented the archaeology will be fully recorded and, therefore, there will be no residual effects.
- 5.9.10 **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.

- 5.9.11 **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 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, and ‘the proposals 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).
- 5.9.12 To conclude, the overall 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. However, for the specific section between Bleabeck Bridge and Salterwath Farm it can be described as a High Adverse Impact because of the relatively large number of important monuments on this short section of the proposed pipeline.

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 numbers of regionally important sites and monuments set within an extensive landscape. In its Planning Policy Guidance, *Note 16* (1990) the Department of the Environment (DoE) advised 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 within the proposed pipeline corridor are presently defined as Scheduled Monuments meaning 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 will affect landscapes of regional importance. There are only a few sites which are directly centred on the line of the pipeline of regional or national importance and necessitate re-routing of the proposed pipeline or any action other than avoiding them.
- 6.1.3 The cairnfield/enclosure Site 100 (*Plate 1*) extends across either side of the pipeline route and the extent to which it will be impacted by the pipeline is not precisely established. There is a previous pipeline cutting through the site on the same alignment and the 20m easement of this will be used for the current proposed pipeline route. However the previous survey of the site (Hart, 1985, *Figure 6.2*) shows that a proportion of the eastern portion of the site has been destroyed. It is recommended that as a minimum a survey of the proposed easement area and in the immediate vicinity of the site be conducted in order to gain a full understanding of what features of the site actually currently survive. During the reconsolidation work carried out for the previous pipeline the Cherrys conducted a field-walking survey, (Cherry and Cherry, 1987, 1-7) this identified four distinct lithic sites (Wickersgill 1-3 and Turnmire 4) with over two thousand artefacts within 350m. It is recommended that a targeted watching brief and possibly evaluation be established for this site. The additional proposed pipeline route runs through a probable prehistoric settlement site (Site 149, *Plate 3*) and it is recommended that the pipeline should be re-routed to avoid it, if the pipeline goes near to the currently defined edges of the site then survey and evaluation should take place. Similarly the boundary bank (Site 146) should be surveyed and evaluated if it is to be cut by the pipeline, as it is possibly related to the prehistoric site.
- 6.1.4 To the south-east of Site 149 is an enclosure/field-system (Site 174), designated a Hazard Area, the known extent of which should be avoided by the pipeline route. In the same area is the putative Bronze Age burnt mound (Site 147) which is close to

the line of the proposed pipeline to the south of the Old Shap Wells Hotel enclosed land. Given its potential archaeological importance the pipeline should be re-routed to avoid this. All of these sites are within the same section of the pipeline to the south of the Old Shap Wells Hotel; an alternative route has been suggested by United Utilities which extends around the northern side of the enclosed lands of Shap Wells Hotel, where there is only a very limited identified archaeological resource.

- 6.1.5 The High Borrow Bridge (Site 110, *Plate 2*), Bleabeck Bridge (Site 176) and Wasdale Old Bridge (Site 105), are some of the more important extant elements belonging to the 1753 turnpike between Shap and Kendal. It is one of the earliest turnpikes in the county (Hindle 1998), and the bridges potentially predate the turnpike (Wainwright 1985). A small diversion of the route would enable the avoidance and therefore the preservation of the bridges. Similarly, the Bannisdale Low Bridge (Site 115) is a component of the original turnpike (from 1753) and was reused by McAdams for his turnpike constructed in 1826. The present line takes it across the bridge and has the potential to adversely affect it. The walkover survey identified that the bridge was constructed for the 1826 turnpike and that the massive structure can physically accommodate the laying of the pipe within the structure without affecting the archway beneath. It is recommended that a watching brief be implemented for this particular site. Of a lesser importance are the bridges carrying minor roads and tracks (Sites 138, 151 and 159) however due to their size and position it should be easy to avoid or re-route around the structures.
- 6.1.6 The route of the two sections of the 1753 turnpike within the proposed pipeline corridor (Sites 136 and 172) should be fully evaluated to assess their archaeological character along the length of their routes. Evaluation should be especially targeted around the ruins of Demings House (Site 155) and the adjacent boundary bank (Site 156) which appear to relate to each other. Demings House should however be avoided if at all possible.
- 6.1.7 Other sites of importance include the undated earthworks at Tunnel Bridge (Site 140) and Salterwath Farm (Site 153) and the possible site of a medieval house (Site 101). If at all possible they should be avoided or the pipeline re-routed, however if the pipeline route passes anywhere close to them it may expose otherwise unknown sub-surface features associated with these sites. In this instance if any features within the pipeline route should be surveyed and evaluated.
- 6.1.8 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 an 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.
- 6.1.9 The area through which the pipeline extends has considerable potential for prehistoric monuments. In particular, at the northern end of the route there is the potential for an extension of the Shap Stone Avenue and the route is in the vicinity of a cairn/enclosure complex (Site 100) and field-systems/enclosures (Sites 149, 174 and 179). It is recommended that extensive evaluation be undertaken of the section, between the northern extent of the route and Site 125, which extends across

unimproved moorland, and also on the additional proposed pipeline from Site 144 which is on the gentle slope of Wasdale Moor.

- 6.1.9 The table below (Table 2) provides a summary of the recommendations for each individual site. This is based on the type and status of a site together with its extent and geographical proximity of the site to the easement corridor. 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 is on the basis that the monument is relatively small and can be avoided within the easement corridor. It is also advised that a watching brief should be ongoing during the entirety of the construction work and should involve small-scale excavation during the project. Where no action is recommended the site is, on the present evidence, unlikely to be affected by the proposed pipeline construction.

Site Number	Site Type	Impact Score	Recommended Action
100	Putative Enclosure and cairns	16	Surve / Watching Brief / Evaluation
101	Site of Medieval House	12	Evaluate
102	Clearance Cairn	11	No Action
103	Mill Building	10	No Action
104	Quarry	13	Avoid
105	Bridge	14	Avoid
106	Quarry	11	Avoid
107	Quarry	9	No Action
108	Quarry	11	Avoid
109	Quarry	13	Avoid
110	Bridge	10	Avoid
111	Bridge	10	No Action
112	Quarry	9	No Action
113	Quarry	11	Avoid
114	Quarry	13	Avoid
115	Bridge	14	Watching Brief
116	Roofed Building	13	Avoid
117	Gravel Pits	13	Avoid
118	Gravel Pit	13	Avoid
119	Potash Kiln	8	No Action
120	Roofed Building	17	Avoid
121	Stone Barn	12	Avoid
122	Weir	10	No Action
123	Hollow-way	7	No Action
124	Farmhouse	7	No Action
125	Quarry	8	No Action
126	Reservoir	10	No Action
127	Drainage Channel	10	No Action
128	Site of a Mill	9	No Action
129	Relict Farmstead	10	No Action
130	Relict Building	13	Avoid
131	Relict Building	12	Avoid
132	Farmstead	13	Avoid
133	Corn Mill	11	No Action
134	Fulling Mill	9	Avoid
135	Tenter Banks	10	No Action

Site Number	Site Type	Impact Score	Recommended Action
136	Turnpike Road	14	Evaluate / Watching Brief
137	Railway	14	No Action
138	Bridge	14	Avoid
139	Weir	9	No Action
140	Earthworks	12	Survey / Evaluate
141	Cairn	11	No Action
142	Cairn	13	Avoid
143	Building Platform	10	No Action
144	Stone Barn	13	Avoid
145	Quarry	12	Avoid
146	Boundary Bank	12	Evaluate / Survey
147	Putative Burnt Mound	12	Re-route
148	Cairn	15	Avoid
149	Settlement	17	Re-Route
150	Bridge	11	Avoid
151	Bridge	13	Avoid
152	Trackways	13	No Action
153	Earthworks	12	Avoid / Re-Route
154	Boundary Bank	12	Avoid
155	Relict Building	11	Avoid
156	Boundary Bank	12	Avoid
157	Boundary Wall	10	No Action
158	Relict Buildings	10	Avoid
159	Bridge	13	Avoid
160	Sheepfold	12	Avoid
161	Quarry	12	Avoid
162	Sheepfold	9	No Action
163	Quarry	10	Avoid
164	Trackway	11	Avoid
165	Trough	10	No Action
166	Mile Post	12	Avoid
167	Mile Post	12	Avoid
168	Sheepfold	9	No Action
169	Trackway	12	No Action
170	Clearance Cairn	9	No Action
171	Relict Building	10	Avoid
172	Turnpike Road	13	Evaluate / Watching Brief
173	Enclosure	12	Avoid
174	Field System / Earthworks	16	Re-Route
175	Spoil Heaps	9	No Action
176	Bridge	10	Avoid
177	Site of Cottages	9	Avoid
178	Cottages	9	No Action
179	Cairnfield/Settlement	13	No Action

Table 6: Recommendations for Each Identified Site

7. BIBLIOGRAPHY

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APPENDIX 1:GAZETTEER OF SITES

Site Number	100	NGR	NY 56304 1230
Site name	Turnmire Bottom A	Period	Prehistoric
Site Type	Earthwork / Cropmark	APs	CCC 3023: 7
SMR Number	4281		MU 150: 25, 26
Source	SMR, LUAU 1997 (H621), Hart 1985, Cherry and Cherry 1987, Survey		
Description	<p>The cairnfield is identified and surveyed by Hart (Hart 1985, 113) and he identifies two centrally placed hut circles placed within the cairnfield on hillocks above the floodplain with entrances facing on to cleared areas. There are slight stone banks and small cairns within the central area and much stone has been cleared to the periphery into the streams and hollows. On the south-western area of the survey was a separate oval structure (Site 143) This site is divorced from the main settlement by a water main.</p> <p>Further to the water main cutting the site, in 1984 British Gas laid a pipeline with a 20m easement across the eastern portion of the site (north-west / south-east) and the Cherry's conducted a fieldwalking survey on the spoil heaps and backfilled easement (Cherry and Cherry, 1987, 1). They identified four distinct lithics sites (Wickers Gill 1-3 and Turnmire Bottom 4) although disturbed and in topsoil. In total they found over two thousand flints within a 350m area of the easement corridor.</p> <p>Two cairns, a bank and a possible enclosure. This represents a significant group of sites relating to an agricultural settlement; the date is uncertain but prehistoric is likely or even possibly medieval. (LUAU 1997, H621)</p> <p>The current walkover survey revealed a small clearance landscape with several linear intermittent alignments of clearance stone piled into possible boundaries. The site occupies a distinct flat plateau slightly raised from the marshy ground on the east side of Wickers Gill to the west, and beneath more undulating ground to the east. The earthworks survive as clearance linears of stone up to 0.3m high maximum by 0.4m wide with moderate-loosely packed sub-rounded surface stones. There is a distinct patch of stone cleared to the bottom edge of the plateau where it meets the marshy ground. This clearance has a corner on the south side, where it turns east and runs towards a clearance cairn. The original limit of the earthworks has been extended further east (and is now roughly 250m diameter) as there is a clearance linear to the south side of a small hill to the south-east of the barn (Site 121) where a small stream runs towards Wickers Gill. The ground on the plateau undulates slightly and there is much natural surface stone that hasn't been cleared, there are several plausible clearance cairns and other possible short sections of clearance linear. The aerial photography clearly shows the linear clearance, the previous pipeline cutting the earthworks and possibly the building platform (Site 143).</p>		

Site Number	101	NGR	NY 5470 0200
Site name	Kids Howe	Period	Medieval
Site Type	Site of medieval house	APs	-
SMR Number	5143	Source	SMR
Description	The possible site of a medieval house.		

Site Number	102	NGR	NY 5650 1160
Site name	Wickers Gill	Period	Medieval – Post-Medieval
Site Type	Clearance Cairn	APs	-
SMR Number	31708	Source	LUAU 1997 (H632)
Description	A small earthfast clearance cairn.		

Site Number	103	NGR	NY 5600 1240
Site name	Crags Mill, Shap	Period	Post-Medieval

Site Type	Mill Structure	APs	-
SMR Number	14825	Source	LUAU 1997
Description	The remains of a mill building and surrounding features. It comprises an L shaped stretch of wall; the rest of the mill has been destroyed by the construction of a farm track. Associated with it is a wheel pit and leat. The site was documented as working in 1758.		

Site Number	104	NGR	NY 5650 1040
Site name	Tunnel Quarry, Shap	Period	Post-Medieval
Site Type	Quarry	APs	-
SMR Number	14830	Source	OS 2nd edn map
Description	An area of disused quarries east of the A6.		

Site Number	105	NGR	NY 5640 0830
Site name	Wasdale, Shap	Period	Post-Medieval
Site Type	Bridge	APs	-
SMR Number	17070	Source	OS 1st edn map (1863); Smith 1967
Description	Wasdale Old Bridge, which was first mentioned in 1649. It is located on part of the 1753 turnpike (Sites 136 and 172). It is a single span arched bridge, originally of sub-rounded stones in a drystone construction but has been roughly packed with mortar. The bridge measures 8m long by 6m wide and up to 2.5m-3m high. The river bank has been revetted on the south side and has a modern clearance cairn next to the north-west corner. The cairn is constructed of large rounded boulders and measures 4m diameter by 0.6m high.		

Site Number	106	NGR	NY 5580 0770
Site name	Collyrag, Orton	Period	Post-Medieval
Site Type	Quarry	APs	-
SMR Number	17042	Source	OS 1st edn map (1863)
Description	A quarry next to the A6 and a second is adjacent.		

Site Number	107	NGR	NY 5520 0750
Site name	Wasdale Beck, Shap	Period	Post-Medieval
Site Type	Site	APs	-
SMR Number	17043	Source	OS 1st edn map (1863)
Description	A quarry site on first edition OS but is possibly only land set aside and not used.		

Site Number	108	NGR	NY 5530 0700
Site name	Demings, Shap	Period	Post-Medieval
Site Type	Quarry	APs	-
SMR Number	17045	Source	OS 1st edn map (1863)
Description	A quarry located near the A6 with an associated trackway.		

Site Number	109	NGR	NY 5540 0580
Site name	Red Crag, Orton	Period	Post-Medieval
Site Type	Quarry	APs	-
SMR Number	17046	Source	OS 1st edn map (1863)
Description	A quarry located adjacent to the A6.		

Site Number	110	NGR	NY 5500 0400
Site name	High Borrow, Fawcett Forest	Period	Post-Medieval

Site Type	Bridge	APs	-
SMR Number	17077	Source	OS 1st edn map (1863); Smith 1967; Wainwright 1985; Hindle 1998
Description	A bridge on the line of the 1753 turnpike (Site 136), which was possibly built as part of that road construction. However the bridge is also on the line of the medieval road between Shap and Kendal and this or an earlier bridge was documented from 1712 and there is a reference to the Borrowbridge Bridges from 1651. The bridge survives as a single span archway with moderately well coursed drystone construction of small-medium sized angular stones with rounded edges. The stones within the arch construction are long, thin and angular. The bridge measures 16m long by 4.5m wide and up to 3.5m high and the river bank is revetted on the north side.		

Site Number	111	NGR	NY 5520 0390
Site name	Hucks Bridge, Whinfell	Period	Post-Medieval
Site Type	Bridge	APs	-
SMR Number	17078	Source	OS 1st edn map (1863); Smith 1967; Hindle 1998
Description	A bridge carrying the A6 over Borrowdale Beck; it replaced Site 110.		

Site Number	112	NGR	NY 5550 0480
Site name	Crookdale Side, Orton	Period	Post-Medieval
Site Type	Quarry	APs	-
SMR Number	17079	Source	OS 1st edn map (1863)
Description	A quarry not shown as such on the OS maps but was almost certainly a disused quarry.		

Site Number	113	NGR	NY 5490 0310
Site name	Hollowgate, Fawcett Forest	Period	Post-Medieval
Site Type	Quarry	APs	-
SMR Number	17084	Source	OS 1st edn map (1863)
Description	A quarry lying between A6 and its precursor road to west.		

Site Number	114	NGR	NY 5470 0220
Site name	Wolf Howe A, Fawcett Forest	Period	Post-Medieval
Site Type	Quarries	APs	-
SMR Number	17089	Source	OS 1st edn map (1863)
Description	Two quarries near the A6.		

Site Number	115	NGR	NY 5420 0110
Site name	Bannisdale Low Bridge	Period	Post-Medieval
Site Type	Bridge	APs	-
SMR Number	17090	Source	OS 1st edn map (1863); Hindle 1998
Description	The bridge was built in 1822 to carry the A6.		

Site Number	116	NGR	NY 5460 0120
Site name	Bannisdale Toll	Period	Post-Medieval
Site Type	Roofed Building	APs	-
SMR Number	17092	Source	OS 1st edn map (1863)
Description	This building lies on both the older turnpike route (1753) and the newer A6 route.		

Site Number	117	NGR	NY 5360 0020
Site name	Plough Inn, Whitwell and Selside	Period	Post-Medieval

Site Type	Gravel Pits	APs	-
SMR Number	17098	Source	OS 1st edn map (1863)
Description	Two gravel pits beside the A6. The overall area is 35m long south-west/north-east by 25m wide and 3m deep. The site is covered in grass and there is no exposed stone. ³³		

Site Number	118	NGR	SD 531 997
Site name	West View, Whitwell and Selside	Period	Post-Medieval
Site Type	Gravel Pit	APs	-
SMR Number	17553	Source	OS 2nd edn map
Description	A gravel pit north east of Garnett Bridge.		

Site Number	119	NGR	NY 5480 0220
Site name	Wolf Howe B, Fawcett Forest	Period	Post-Medieval
Site Type	Potash Kiln	APs	-
SMR Number	17863	Source	SMR
Description	The site of a potash kiln.		

Site Number	120	NGR	SD 5280 9900
Site name	Watchgate House	Period	Post-Medieval
Site Type	Roofed Building	APs	-
SMR Number	19019	Status	Listed Building, Grade II
Source	RCHME 1936		
Description	A seventeenth century building.		

Site Number	121	NGR	NY 5620 1220
Site name	Turnmire Bottom B	Period	Post-Medieval
Site Type	Stone Barn	APs	-
SMR Number	31701	Source	LUAU 1997 (H622)
Description	A large stone barn and former enclosure, which site is still in use. The barn has a long and thin rectangular central structure with H-shaped outer wing walls. The wing walls are partially ruinous but have two phases. First are short 4m long wall stubs then a second phase of 10m long extensions. The extension walls are up to 2m high, and constructed of alternate bands of large rounded stone courses and single layers of flat angular stone courses.		

Site Number	122	NGR	NY 5600 1250
Site name	Cocklethwaite	Period	Modern
Site Type	Weir	APs	-
SMR Number	31692	Source	LUAU 1997
Description	A concrete weir.		

Site Number	123	NGR	NY 5656 1203
Site name	Wickers Gill A, Shap	Period	Modern
Site Type	Hollow-way	APs	-
SMR Number	31702	Source	LUAU 1997
Description	A holloway joining the modern road to a reservoir. Its length is 100m, and its width is 20m.		

Site Number	124	NGR	NY 5661 1199
Site name	Wickers Gill B, Shap	Period	Post-medieval to modern
Site Type	Farmhouse	APs	-

SMR Number	31703	Source	LUAU 1997
Description	A farmhouse and walled enclosure. It is a well-built stone farmhouse surrounded by a dry-stone wall enclosure. The site is in current use but in a state of disrepair.		

Site Number	125	NGR	NY 5660 1190
Site name	Wickers Gill C, Shap	Period	Post-medieval to modern
Site Type	Quarry	APs	-
SMR Number	31704	Source	LUAU 1997
Description	Two small quarries or extractive pits which have an entrance leading from the modern road to the east. Each are c20m across.		

Site Number	126	NGR	NY 5662 1177
Site name	Wickers Gill D, Shap	Period	Modern
Site Type	Reservoir	APs	-
SMR Number	31705	Source	LUAU 1997
Description	A recently constructed reservoir.		

Site Number	127	NGR	NY 5650 1170
Site name	Wickers Gill E, Shap	Period	Modern
Site Type	Drainage Channel	APs	-
SMR Number	31707	Source	LUAU 1997 (H630)
Description	A modern drainage channel linked to Site 126. The channel is v-shaped, measuring 3m wide by 0.5m deep and runs north / south downslope into the reservoir.		

Site Number	128	NGR	NY 5440 0110
Site name	Forest Hall A	Period	Unknown
Site Type	Mill site	APs	-
SMR Number	5139	Source	SMR
Description	The site of a mill.		

Site Number	129	NGR	NY 5430 0090
Site name	Primrose Hill A	Period	Unknown
Site Type	Farmstead	APs	-
SMR Number	5140	Source	SMR
Description	The remains of a farmstead.		

Site Number	130	NGR	NY 5420 0100
Site name	Primrose Hill B	Period	Unknown
Site Type	Ruined Building	APs	-
SMR Number	5141	Source	OS 1st edn map (1863)
Description	The remains of an unclassified ruined building. To the east side of the road at Baldock Plantation is a gate, within the field from this is the remains of an enclosure wall, within the build of the enclosure wall is the remains of a small rectangular drystone building. The boundary wall is denuded and does not survive to the west of the building, but there is a distinct rectangular platform. The platform measures 6m long north/south by 5m wide. To the north-east of the platform survives the corner of the building. The corner is constructed of sub-angular stone slabs and is up to 1.4m high. The enclosure wall runs from the extant corner of the building into the field and returns north towards Bannisdale Beck. Outside of the assessment area are other similar buildings (surviving better) placed within the wall.		

Site Number	131	NGR	NY 5410 0060
Site name	Cooper House	Period	Unknown
Site Type	Ruined Building	APs	-
SMR Number	5189	Source	SMR
Description	The possible site of a ruined rectangular building. No evidence found within the walkover survey.		

Site Number	132	NGR	NY 5510 0410
Site name	High Borrow Bridge A	Period	Unknown
Site Type	Farmstead	APs	-
SMR Number	5191	Source	SMR
Description	An earlier farmstead which has been incorporated into the present farm buildings. The site consists of a linear development of three farm buildings including a barn and a cow shed located on the side of the 1753 turnpike (Site 136). The buildings measure approximately 39m long north / south by 7m wide and all survive roofed to full two storey height. All the buildings are constructed of well coursed angular and sub-angular medium sized stones with lime mortar. The northern building is a barn with two more buildings adjoining it. To the east of the road is a small slate roofed rectangular ancillary building. The building measures 8m long east / west by 5m wide.		

Site Number	133	NGR	NY 5410 0110
Site name	Low Jock Scar	Period	Unknown
Site Type	Site of Corn Mill	APs	-
SMR Number	30800	Source	SMR
Description	The site of a corn mill with a weir further upstream.		

Site Number	134	NGR	NY 5520 0440
Site name	Crookdale Beck A	Period	Unknown
Site Type	Site of Fulling Mill	APs	-
SMR Number	30805	Source	SMR
Description	The site of a fulling mill. A distinct area of demolition rubble amongst trees and dense undergrowth is all that is seen from the opposite bank.		

Site Number	135	NGR	NY 5510 0440
Site name	Crookdale Beck B	Period	Unknown
Site Type	Site of Tenter Banks	APs	-
SMR Number	30807	Source	SMR
Description	The possible site of tenter banks. The area opposite the remains of the fulling mill (Site 134) has a possible man-made earthen bank and flattened platform area of some 25m square, with a sinuous bank up to 1.5m high on the south end. The ground has been disturbed in the past.		

Site Number	136	NGR	NY 5510 0422 – 4770 0266
Site name	Hollowgate	Period	1753
Site Type	Turnpike Road	APs	-
SMR Number	-	Source	Hindle 1998, 152
Description	The line of a now detrunked turnpike, which was the earliest north/south road between Shap and Kendal built from 1753 (the date of the turnpike act). In 1826 McAdam designed a new turnpike which bypassed this section of road, forming the present day A6. The most significant extant element of the road is the High Borrow Bridge.		

Site Number	137	NGR	NY 58730 09165 – 56720 12090
Site name	Shap Summit	Period	Nineteenth Century
Site Type	Section of Railway	APs	-
SMR Number	-	Source	OS 2nd edn map
Description	A section of railway adjacent to the line of the pipeline. Railway line is the principal north/south Oxenholme to Shap line and is in current use.		

Site Number	138	NGR	NY 56837 10001
Site name	Bleabeck Bridge, B	Period	Nineteenth Century
Site Type	Bridge	APs	-
SMR Number	-	Source	Survey
Description	A small road bridge located directly west of the barn (Site 144) at Bleabeck, on the east / west road between Shap Wells Hotel and Shap Lodge. The bridge measures 7m long east / west by 5m wide and up to 1.8m high. It has a single span arch, the build is of small-medium angular stones up to ten courses high. It originally had a gatepost on each corner, all are flattened apart from that on the north-west side. The bridge arch has been filled with a large cylindrical concrete drainage pipe and packed on the outside with rubble.		

Site Number	139	NGR	NY 56808 09983
Site name	Bleabeck Bridge C	Period	Twentieth Century
Site Type	Weir	APs	-
SMR Number	-	Source	Survey
Description	A modern concrete weir, located upstream (to the south) of the small road bridge (Site 139) on a small tributary of Blea Beck. The weir consists of a concrete slab covering the width of the stream, measuring 6m long by up to 0.6m high.		

Site Number	140	NGR	NY 56558 10357
Site name	Tunnel Bridge	Period	Unknown
Site Type	Earthworks	APs	-
SMR Number	-	Source	Survey
Description	A grouping of undulating earthworks located on the east side of the A6, and just to the south of Tunnel Bridge, next to the Shap Blue Quarry (Site 104). The earthworks consist of a low flattened area, slightly raised from the surrounding grassy field (measuring up to 50m east / west by 30m and 0.3m high). There is a suggestion of a curving drainage gully running around the south-east side towards Blea Beck, and mixed undulating disturbance on the west side. The site is possibly disturbance from the construction / use of the quarry and it's now dismantled railway line.		

Site Number	141	NGR	NY 56547 11166
Site name	Low Fell	Period	Unknown
Site Type	Cairn	APs	-
SMR Number	-	Source	Survey
Description	A small ovoid, earthfast, and grass-covered cairn located to the north of Shap Blue Quarry and to the west of the Shap Granite Works. The rough pasture field has much outcropping and surface exposed stone but the cairn is a distinct grouping of stone. The site measures 5m long north / south by 3.5m wide and up to 0.5m high. It has small sub-rounded stone exposed in places.		

Site Number	142	NGR	NY 56432 12024
Site name	Turnmire Bottom, C	Period	Unknown

Site Type	Cairn	APs	-
SMR Number	-	Source	Survey
Description	A small amorphous clearance cairn located on the southern fringe of the earthwork clearance complex (Site 100). The cairn consists of a very loose clearance episode of randomly sized, natural surface stone. It measures up to 3m diameter by 0.3m high although no stones are placed above one another.		

Site Number	143	NGR	NY 56254 12040
Site name	Turnmire Bottom, D	Period	Prehistoric
Site Type	Building Platform	APs	-
SMR Number	-	Source	Survey
Description	Possible sub-square building remains located on the south-west limit of the earthwork clearance complex (Site 100). The site survives as small earthwork banks with clearance stone incorporated in. It measures approximately 7m square with slight banks up to 0.5m wide by 0.2m high, interspersed with medium-large sub-rounded and sub-angular clearance stone. The earthwork is more denuded on the south side.		

Site Number	144	NGR	NY 56877 09995
Site name	Bleabeck Bridge, D	Period	Nineteenth/Twentieth Century
Site Type	Barn	APs	-
SMR Number	-	Source	Survey, Current OS mapping
Description	Large stone barn and former enclosure. The site is located to the south of Bleabeck Bridge (Site 176) and is still in use. The barn is of a type with a long and thin rectangular central structure with H-shaped outer wing walls (as Site 121). The wing walls are short 4m long wall stubs. Unlike the other barn the central roofed structure has been enclosed into pens with wooden planking instead of being left open.		

Site Number	145	NGR	NY 56938 100007
Site name	Bleabeck Bridge, E	Period	Nineteenth/Twentieth Century
Site Type	Quarry	APs	-
SMR Number	-	Source	Survey
Description	Extensive, amorphous, quarrying and pitting located on the east side of the barn (Site 144) at Bleabeck Bridge. The site survives as a grassed-over area of disturbed ground with numerous pits and spoil heaps up to at total of 35m diameter by up to 1.2m deep.		

Site Number	146	NGR	NY 57344 09898 – 57474 09916
Site name	Bleabeck	Period	Unknown
Site Type	Boundary Bank	APs	-
SMR Number	-	Source	Survey
Description	A small section of curvilinear boundary bank running downslope and to the east from the road between Shap Lodge and the Shap Wells Hotel. The bank runs underneath the modern boundary fence and towards the Blea Beck where there is a walled plantation. The boundary survives as an earthen bank with grassed-over rounded stones and measures up to 2.5m wide by 0.5m high. The bank is not shown on either the current or 1 st edition mapping. It is of a similar form as and may be associated with the Prehistoric/Roman settlement complex to the south-east (Site 149).		

Site Number	147	NGR	NY 57568 09667
Site name	Wasdale Foot, B	Period	Bronze Age ?
Site Type	Burnt Mound	APs	-
SMR Number	-	Source	Survey
Description	A small kidney-shaped earthen mound, located in the field to the north of the road running between Shap Lodge and the Shap Wells Hotel, just to the west of the		

Prehistoric/Roman settlement complex (Site 149). The mound is grass covered with no stone protruding. It measures 6m long east / west by 4.5m wide and up to 0.8m high. It is within an area of poorly drained ground. The site could possibly be related to the settlement complex, although it is not a clearance feature and given its shape and its association with water could potentially be a burnt mound.

Site Number	148	NGR	NY 57636 09623
Site name	Wasdale Foot, C	Period	Prehistoric
Site Type	Cairn	APs	-
SMR Number	-	Source	Survey
Description	A small cairn located directly to the north-west of the Prehistoric/Roman settlement complex (Site 149). The site consists of an earthfast stone measuring 1.2m square, the southern end of which is sloping into the ground and is covered with cairn material. The cairn material is tightly packed, small angular and sub-angular stones collected around the south end of the earthfast stone, and encroaching on to the top of it. The cairn material and earthfast combined do not exceed over 0.2m high. The cairn is possibly a clearance feature although the stones are small and it may be funerary.		

Site Number	149	NGR	NY 57700 509600
Site name	Wasdale Foot, A	Period	Prehistoric/Roman
Site Type	Settlement	APs	MU 46, 33,34
SMR Number	1940	Source	SMR, Survey
Description	<p>Remains of a probable Iron Age / Romano-British settlement site on the west side of the junction of Wasdale and Blea Becks. It consists of traces of a field system and two rectangular enclosures (but no hut circles). The complex covers an area of rough pasture approximately 400m long north-east / south-west by 300m east / west on the east facing slope of Wasdale Fell.</p> <p>The survey revealed two almost parallel large boulder set banks running south-west / north-east towards the bridge at Shap Wells Hotel (Site 150). The northernmost of these banks (truncated by the road) has medium-large rounded boulders set in a double thickness, measuring up to 1m wide by 0.7m high. Connected to this bank is a probable sub-rectangular enclosure on the west end that is partially truncated by the corner of the road as it turns north to the hotel. The south-west end of the enclosure is denuded but the opposite end has a substantial bank. The bank consists of a single thickness of medium-large rounded boulders set into it and measures 0.6m wide by 1.2m high. On the south side of the road there is a short section of an internal divisional bank that would have linked the enclosure on the first bank with the other parallel bank to the south.</p> <p>The second parallel bank has two clearance cairns located on the south-western end. The northernmost clearance cairn is sub-oval, measuring 8m long south-west / north-east by 3m wide and 0.8m high. It is constructed of moderately compacted large rounded boulders and small sub-angular stones. The second clearance cairn is sub-circular and measures 5m diameter by 0.3m high. It is constructed of tightly packed small-medium sub-rounded and sub-angular stones. Outside of the assessment corridor there is evidence of another parallel bank running along the north bank of Wasdale Beck.</p> <p>The western limit of the settlement is demarcated by a new farm track running north / south from the road that has cleared and levelled a substantial area of ground. The northern limit of the settlement (and marked on the current OS mapping) is within the woodland on west bank of Blea Beck by the hotel. The woodland is overgrown with many large rounded boulders sitting on the ground, but the ground is disturbed and no further enclosure banks were seen here.</p>		

Site Number	150	NGR	NY 57844 09578
Site name	Old Shap Wells, A	Period	Nineteenth Century

Site Type	Bridge	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	A road bridge located over Blea Beck to the west of Old Shap Wells Hotel. The bridge measures 9m long by 7m wide and is up to 3m high. It is constructed with a single archway from angular quarried and mortar set stones, and with large angular coping stones on the ledges.		

Site Number	151	NGR	NY 58211 09302
Site name	Salterwath, A	Period	Post-Medieval
Site Type	Bridge	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	A bridge carrying a farm track over Trundle Beck to the west of Salterwath Farm. The bridge measures 13m long by 3m wide by up to 2.5m high. It is of a humped-back, single arch construction with a sub-rounded drystone build and drystone revetting walls on either bank. The superstructure of the bridge is constructed of wood.		

Site Number	152	NGR	NY 58280 09300
Site name	Salterwath, B	Period	Unknown
Site Type	Tracks/Drains	APs	-
SMR Number	-	Source	Survey
Description	Two linear trackways or drains running downslope towards Trundle Beck on the west side of Salterwath Farm. The first track is curvilinear but running roughly north / south, it is u-shaped and measures 1.5m–2m wide by 0.5m deep. The second trackway is linear and runs north-east / south west. It is u-shaped and measures 1.8m-2m wide by 0.5m deep.		

Site Number	153	NGR	NY 58490 09430
Site name	Salterwath, C	Period	Unknown
Site Type	Earthworks	APs	-
SMR Number	-	Source	Survey
Description	A complex of earthworks located to the north-east of Salterwath Farm, on the west side of the farm track by the bridge under the railway (Site 137). There is a sub-square cut quarry area measuring 30m square by the side of the railway embankment. To the immediate south of this is a small square levelled platform (possibly for a building). The platform measures 6m square by up to 0.3m high. To the south-west of the platform is a small area of possible narrow ridge and furrow up to a total of 25m square and running roughly north-east / south-west. To the south of the platform and adjacent to the farm track is a small modern clearance cairn of loosely packed randomly assorted stones. The cairn measures up to 3m diameter by 0.3m high.		

Site Number	154	NGR	NY 56706 09088 – 56677 09036
Site name	Wasdale Turnpike, A	Period	Post-Medieval
Site Type	Boundary Bank	APs	-
SMR Number	-	Source	Survey
Description	A boundary bank surviving intermittently on the east side of the 1753 turnpike road (Site 172). The bank survives just north of the junction between the turnpike and the modern A6 at Wasdale Foot and runs north for approximately 100m towards Bleabeck Bridge. The bank survives as an earthen bank with grass covered small-medium sized rounded stones. It measures up to 1.5m wide by up to 0.4m high with the majority of the stones exposed on the central ridge. The bank becomes denuded as it moves north although there are small sections extant further north.		

Site Number	155	NGR	NY 55476 07073
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Site name	Demings House	Period	Post-Medieval
Site Type	Ruins	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	The ruins at Demings House were already a ruinous three-celled building on the OS First Edition mapping. The site consists of a large rectangular pile of demolition / collapse debris measuring 9m long north / south by 6m wide and up to 0.5m high. The west wall survives up to four courses high (0.5m) at the south end, and is of sub-angular drystone construction. To the north of the house is a flat yard area measuring 15m square with a gap in the turnpike boundary bank (Site 156) as an entrance from the turnpike (Site 172).		

Site Number	156	NGR	NY 55752 07417 – 55364 06872
Site name	Wasdale Turnpike, B	Period	Post-Medieval
Site Type	Boundary Bank	APs	-
SMR Number	-	Source	Survey
Description	A boundary bank surviving intermittently on the east side of the 1753 turnpike road (Site 172). The bank survives just north of the junction between the turnpike and the modern A6 next to Demings House (Site 155) and running towards Packhorse Hill. The bank survives as an earthen bank with grass covered small-medium sized rounded stones. It measures up to 1.5m wide by up to 0.4m high with the majority of the stones exposed on the central ridge. The bank becomes denuded as it moves north although there are small sections extant further north. There is a gap / entranceway in the bank next to the yard associated with Demings House.		

Site Number	157	NGR	NY 55306 05669 – 55316 05603
Site name	House Foot, A	Period	Post-Medieval
Site Type	Boundary Wall	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	Ruinous enclosure boundary wall shown on the OS First Edition mapping. It is running north-south along the side of Crookdale, half way up the valley side beneath the A6 and forms the eastern enclosure boundary of House Foot Farm. The foundation stones of the wall run intermittently for 100m and measure 2m wide by up to 0.6m high. The wall foundation is constructed of frequent small-medium angular stones and small boulders with earth packed against them.		

Site Number	158	NGR	NY 55166 05387
Site name	House Foot, B	Period	Post-Medieval
Site Type	Ruins	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	The ruins of barns and outbuildings on the valley bottom in Crookdale to the south of House Foot Farm. The buildings are shown on the OS First Edition Mapping. The site consists of a group of different phases of single storey rectangular buildings butting together in a linear development. The northern building is the oldest, it is placed on a stone platform (possibly of an earlier building) up to one course high. The building survives un-roofed up to full height and measures 8m long north / south by 6m wide. It is constructed of well-coursed flat sub-rounded stones. There is a blocked doorway on the east side. The next building to the south butts up to the quoins of the first. It measures 7m long by 6m wide and survives to full height with partial slate roofing. There is a large doorway to the east and the building style is less regular than the first building, with uneven courses. To the south there are two more smaller rectangular buildings butting on. These are probably ancillary buildings compared to the barns.		

Site Number	159	NGR	NY 55157 04182
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Site name	High Borrow Bridge, B	Period	Post-Medieval
Site Type	Bridge	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	A small single span arched bridge, carrying the farm track over Crookdale Beck to the east of the farmstead (Site 132). The bridge measures 13m long by 5m wide and up to 3m high. There is a revetted curving outer wall on both the south-west and south-east banks up to 5m long. The build is of long and thin, well coursed angular stones, mortared together with concrete and with rounded coping stones on top.		

Site Number	160	NGR	NY 55234 04841
Site name	House Foot, C	Period	Post-Medieval
Site Type	Sheepfold	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	A small square sheepfold shown on the OS First Edition mapping on the east side of the 1753 turnpike (Site 136) in Crookdale. The structure survives as an 8m square drystone structure up to 1.2m high with a blocked entranceway on the west side.		

Site Number	161	NGR	NY 55371 06652
Site name	Demings Moss	Period	Post-Medieval
Site Type	Quarry	APs	-
SMR Number	-	Source	Survey
Description	A small sub-circular localised quarry. The site measures 10m diameter by 1.5m deep with a working face on the south side.		

Site Number	162	NGR	
Site name	Packhorse Hill	Period	Unknown
Site Type	Sheepfold	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	A small sheepfold located on the north-east slope of Packhorse Hill and shown on the OS First Edition mapping. The structure survives as a rectangular drystone enclosure measuring 10m long north / south by 5m wide. The walls are constructed of moderately coursed medium to large sub-rounded and sub-angular stones, up to six courses and 1m high. There is an entrance on the east side with two small pillar stones at each end.		

Site Number	163	NGR	NY 54989 03462
Site name	Nab End, A	Period	Post-Medieval
Site Type	Quarry	APs	-
SMR Number	-	Source	Survey
Description	Two sub-circular quarry bays cut into the hillside where the turnpike (Site 136) and the modern A6 diverge at Nab End. The total area of the quarries measures 25m long east / west by 15m wide by 3m deep. There is a curvilinear spoil heap running from the eastern scoop, this slightly covered the surface of the trackway (Site 164) that runs to the south of it. To the south of the quarry (over the trackway) is a small linear trackway running diagonally downslope. It measures 2m wide with 1m high upcast earthen banks on either side.		

Site Number	164	NGR	NY 54975 03449 – 55063 03456
Site name	Nab End, B	Period	Post-Medieval
Site Type	Trackway	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	A substantial linear trackway, shown on the OS First Edition mapping and running east / west where the turnpike and modern A6 diverge at Nab End. It is probably the remains of an earlier roadway as it is cut into the hillside, measures 7m wide with a grassed over		

surface. There are partial drystone revetting walls surviving on the south (downslope) side in places. The track is slightly overlain by the spoil heap from the quarry (Site 163) located directly to the north.

Site Number	165	NGR	NY 54110 00946
Site name	Baldock Plantation	Period	Post-Medieval
Site Type	Trough	APs	-
SMR Number	-	Source	Survey
Description	A stone horse trough located on the west side of the bridleway in Baldock Plantation. It is placed at the corner of a field boundary wall, and is revetted into the hillside with a wall 1m high, constructed of small angular stones, on the west side. The trough is 4m long north/south by 0.9m wide and 0.25m deep. The sides are constructed of long flat stone slabs.		
Site Number	166	NGR	NY 54033 00559
Site name	Lowbridge Lodge	Period	1826
Site Type	Mile Post	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	Cast Iron mile post located on the west side of the 1826 portion of the A6 at Lowbridge Lodge. The post is cast with a hollow back, it is columnar with three faces and a rounded top. The inscription reads '1825 – Shap 10miles, Kendal 6miles'. The post measures 0.5m high by 0.25m wide and 0.15m deep.		
Site Number	167	NGR	NY 52855 99509
Site name	North Gateside	Period	1826
Site Type	Mile Post	APs	-
SMR Number	-	Source	OS 1st edn map (1863), Survey
Description	Cast Iron mile post located on the west side of the 1826 portion of the A6 North Gateside Farm. The post is cast with a hollow back, it is columnar with three faces and a rounded top. The inscription reads '1825 – Shap 11miles, Kendal 5miles'. The post measures 0.5m high by 0.25m wide and 0.15m deep.		
Site Number	168	NGR	SD 52737 99264
Site name	South Gateside	Period	Twentieth Century
Site Type	Sheepfold	APs	-
SMR Number	-	Source	Survey
Description	A modern sheepfold located to the south-west of South Gateside Farm on the west side of the A6. The structure measures 5m square by 1.2m high. The walls are 0.3m thick and are constructed of well-coursed small-medium sized angular stones with diagonal coping. The coping has been mortared with concrete.		
Site Number	169	NGR	NY 54406 01187 – 54411 01055
Site name	Forest Hall, B	Period	Unknown
Site Type	Trackway	APs	-
SMR Number	-	Source	Survey
Description	A small sinuous trackway running downslope from the A6 towards the site of the mill (Site 128) near Forest Hall. The trackway runs east/west near the road then turns and runs north/south over the field towards the mill. The trackway is cut into the hillside with rounded upcast earthen banks on either side. The track measures 2m wide by 0.3m deep with banks 1m wide by 0.4m high.		
Site Number	170	NGR	NY 5449 01174

Site name	Forest Hall, C	Period	Post-Medieval
Site Type	Clearance Cairn	APs	-
SMR Number	-	Source	Survey
Description	A modern amorphous clearance dump located on the west side of a small stream running towards Bannisdale Beck. The clearance measures 6m diameter by 0.5m high. It is constructed of loosely packed small-medium angular stones and medium sized rounded boulders only one stone deep.		
Site Number	171	NGR	NY 54997 01570
Site name	Muddy Brow Plantation	Period	Post-Medieval
Site Type	Ruin	APs	-
SMR Number	-	Source	Survey
Description	The ruins of a small store building built into the enclosure wall on the east side of Muddy Brow Plantation next to the road. The wall built into the enclosure wall survives and measures 6m long north/south by 0.3m thick and up to 1.4m high. There is an obvious corner on the north end where the low remains of a wall runs into the undergrowth to the west for 1m before becoming foundations. The building would have originally been 4m wide. There is a small brick lined window (0.3m long by 0.25m high) in the wall with iron bars protecting it.		
Site Number	172	NGR	NY 55310 06830 – 56900 10560
Site name	Wasdale Turnpike	Period	1753
Site Type	Turnpike Road	APs	-
SMR Number	-	Source	Hindle 1998, 152, Survey
Description	The line of a now detrunked turnpike, which was the earliest north/south road between Shap and Kendal built from 1753 (the date of the turnpike act). In 1826 McAdam designed a new turnpike which bypassed this section of road, forming the present day A6. This is a continuation of the turnpike (Site 136) at Borrow Bridge.		
Site Number	173	NGR	NY 57700 09500
Site name	Wasdale Foot, D	Period	Unknown
Site Type	Enclosure	APs	MU 46 33,34
SMR Number	3517	Source	SMR
Description	A small circular enclosure of unknown date. The site is possibly part of the Wasdale Foot Settlement (Site 149).		
Site Number	174	NGR	NY 357890 509100
Site name	Castle Howe	Period	Unknown
Site Type	Field System/Earthwork	APs	STJ 94
SMR Number	3823/16546		MU 46 35,36 MU 47 18,23,24
Source	SMR		MU 52 16-19 MU 150 32
Description	A field system of unknown date located in the field to the south of the covered reservoir. It consists of an area of ridge and furrow with two rectangular enclosures overlain by a disused golf course. One of the enclosures may be a possible double ditched defensive site.		
Site Number	175	NGR	NY 58060 10010 – 57340 10700
Site name	Shap Summit	Period	Post-Medieval
Site Type	Spoil Heaps	APs	CCC 2468 9,10
SMR Number	5295	Source	SMR
Description	Spoil heaps running along the side of the railway (Site 137) next to a cutting to the north of Old Shap Wells Hotel.		

Site Number	176	NGR	NY 56900 10040
Site name	Bleabeck Bridge, A	Period	Post-Medieval
Site Type	Bridge	APs	-
SMR Number	14847	Source	SMR, OS 1st edn map (1863)
Description	A small extant bridge crossing Blea Beck along the line of the 1753 turnpike (Site 172). There is a bridge documented here from 1679.		

Site Number	177	NGR	NY 58605 09380
Site name	Salterwath, D	Period	Post-Medieval
Site Type	Cottages	APs	-
SMR Number	17061	Source	SMR, OS 1st edn map (1863)
Description	The site of cottages and a well located on the east side of the railway embankment (Site 137) to the east of Salterwath Farm. Shown on the OS First Edition as two cottages in a garden enclosure with a well to the south.		

Site Number	178	NGR	NY 58300 09900
Site name	Old Shap Wells, B	Period	Post-Medieval
Site Type	Cottage	APs	-
SMR Number	-	Source	OS 1st edn map (1863)
Description	A cottage shown on both the OS current and First Edition mapping as roofed. It is located within the grounds of Old Shap Wells Hotel, at the north-east corner where the grounds are cut by the railway line (Site 137).		

Site Number	179	NGR	NY 56130 10800
Site name	Tewsett Pike	Period	Prehistoric
Site Type	Cairnfield/Settlement	APs	-
SMR Number	8326		
Source	SMR, CLAU 1984, Hart 1985, Turner 1991		
Description	<p>A discrete cairnfield located on the north-west edge of Shap Blue Quarry, with evidence of at least five hut-circles (with eastern entrances) on the south-east of the hill. The area containing these structures are in the third of the site now destroyed by quarrying. There are nine linear clearance banks surrounding a series of oval and rectangular cleared areas within the cairnfield, including several internal divisions. (Hart 1985, 111)</p> <p>The site was surveyed later in 1984 but not the eastern third of the cairnfield with the hut circles. The new survey identified two hundred and thirty-nine features including forty-one round cairns, nine long cairns, a possible ring cairn, fifteen banks or walls and an additional four enclosures/hut circles on the extreme southern boundary. (CLAU 1984, A9 and Turner 1991, 10)</p>		

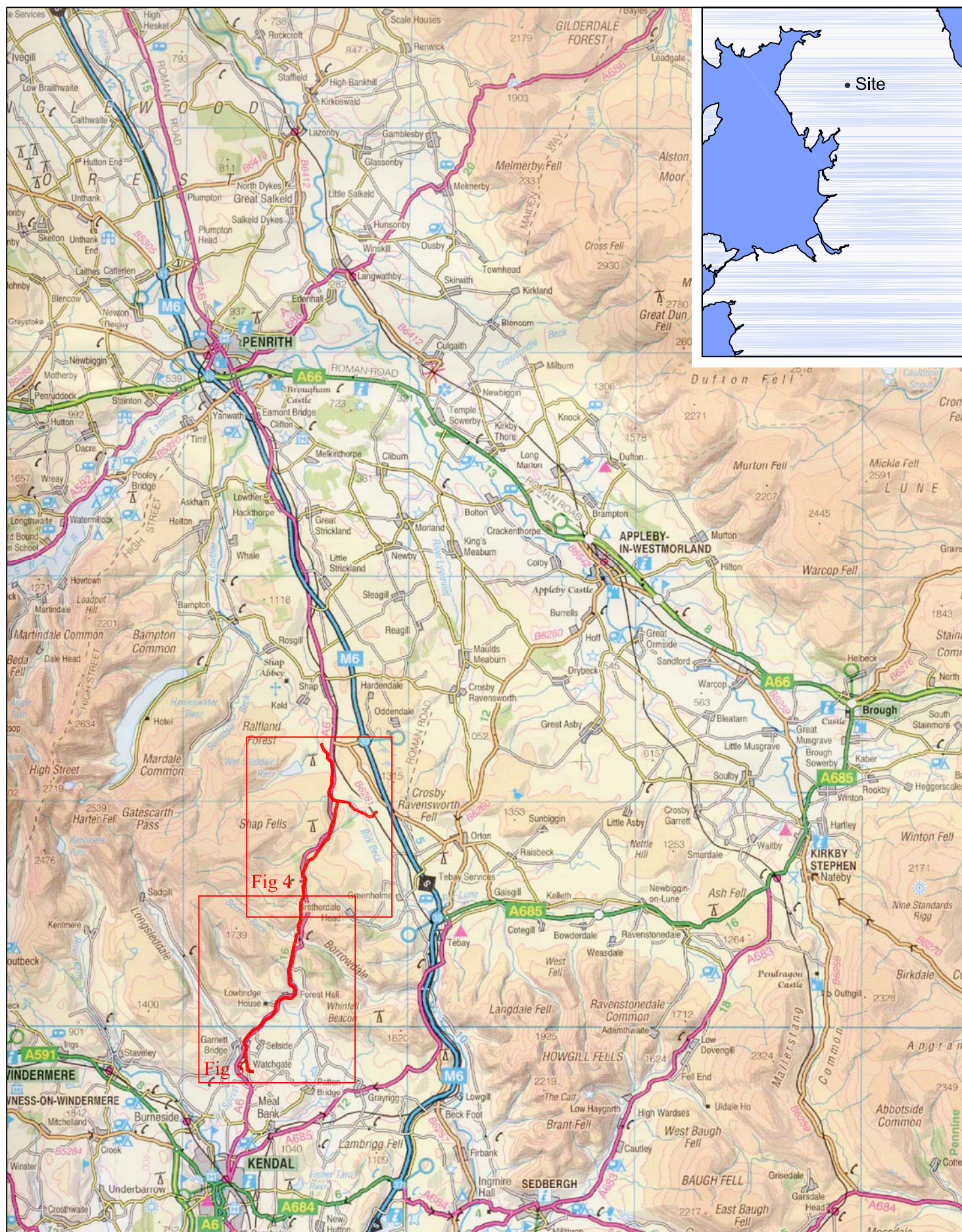
ILLUSTRATIONS

FIGURES:

- Figure 1: Location Map
- Figure 2: First Edition OS map with the proposed pipeline route indicated, Shap to Watchgate - North
- Figure 3: First Edition OS map with the proposed pipeline route indicated, Shap to Watchgate - South
- Figure 4: Shap to Watchgate map, showing the proposed route, the gazetteer sites and sites noted from the First Edition OS map - North
- Figure 5: Shap to Watchgate map, showing the proposed route, the gazetteer sites and sites noted from the First Edition OS map – South

PLATES:

- Plate 1: Site 100, Turnmire Bottom A: Earthwork, looking west.
- Plate 2: Site 110, High Borrow: Bridge, looking west.
- Plate 3: Site 149, Wasdale Foot A: Settlement, looking south west.
- Plate 4: Site 148, Wasdale Foot B: Clearance Cairn, looking north west.
- Plate 5: Site 147, Wasdale Foot: putative burnt mound



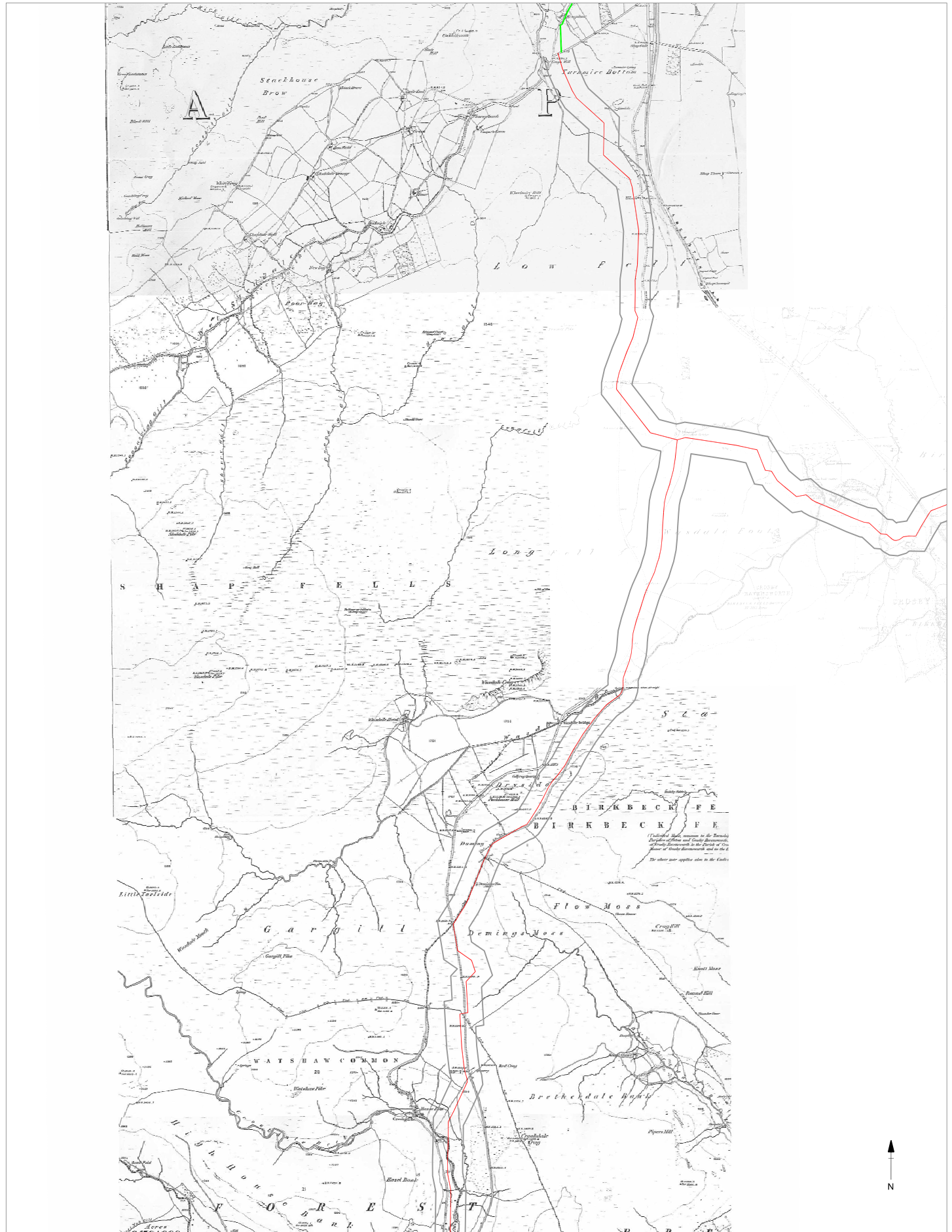
based upon the Ordnance Survey 1:250,000
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 Pipeline Route



0 5
kilometres

Figure 1: Location Map

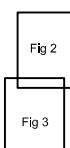


Oxford Archaeology North
Storey Institute
Meeting House Lane
Lancaster
LA1 1TF

Tel 01524 848666
Fax 01524 848606

PROJECT: Shap to Watchgate, Cumbria
DRAWING No: 2
SCALE: 1:25,000
TITLE: North section, 1st edition OS map
CLIENT: United Utilities
DRAWN BY: AJP
DATE: February 2003

LOCATION:

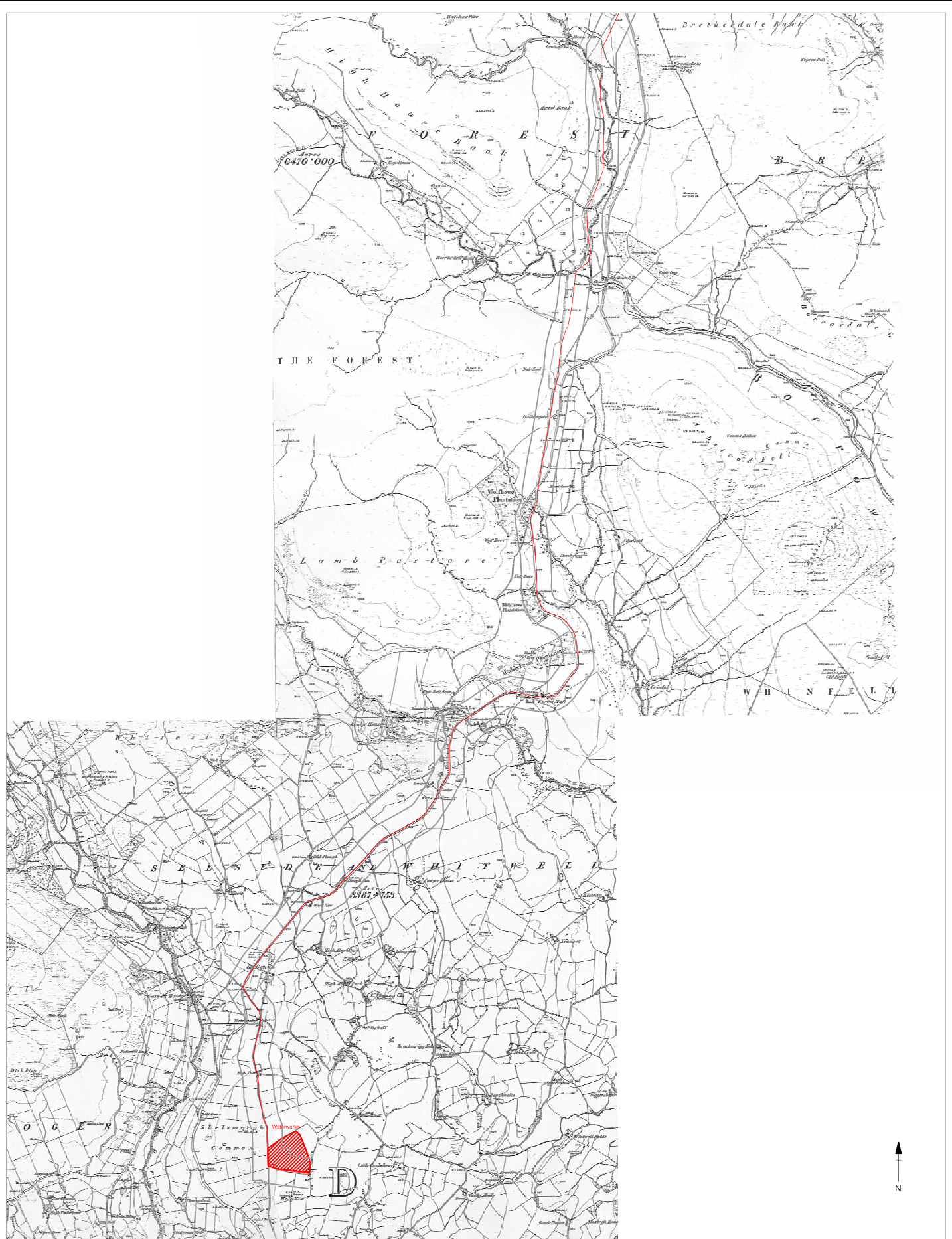


0 500m

KEY

— Route of Pipeline
— Hayeswater Pipeline

Figure 2: First Edition OS Map with the proposed pipeline route indicated, Shap to Watchgate - North

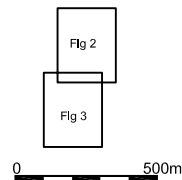


Oxford Archaeology North
Storey Institute
Meeting House Lane
Lancaster
LA1 1TF

Tel 01524 848666
Fax 01524 848606

PROJECT: Shap to Watchgate, Cumbria
DRAWING No: 3
SCALE: 1:25,000
TITLE: South section, 1st edition OS map
CLIENT: United Utilities
DRAWN BY: AJP
DATE: February 2003

LOCATION:



KEY

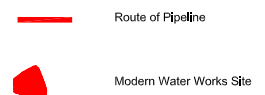
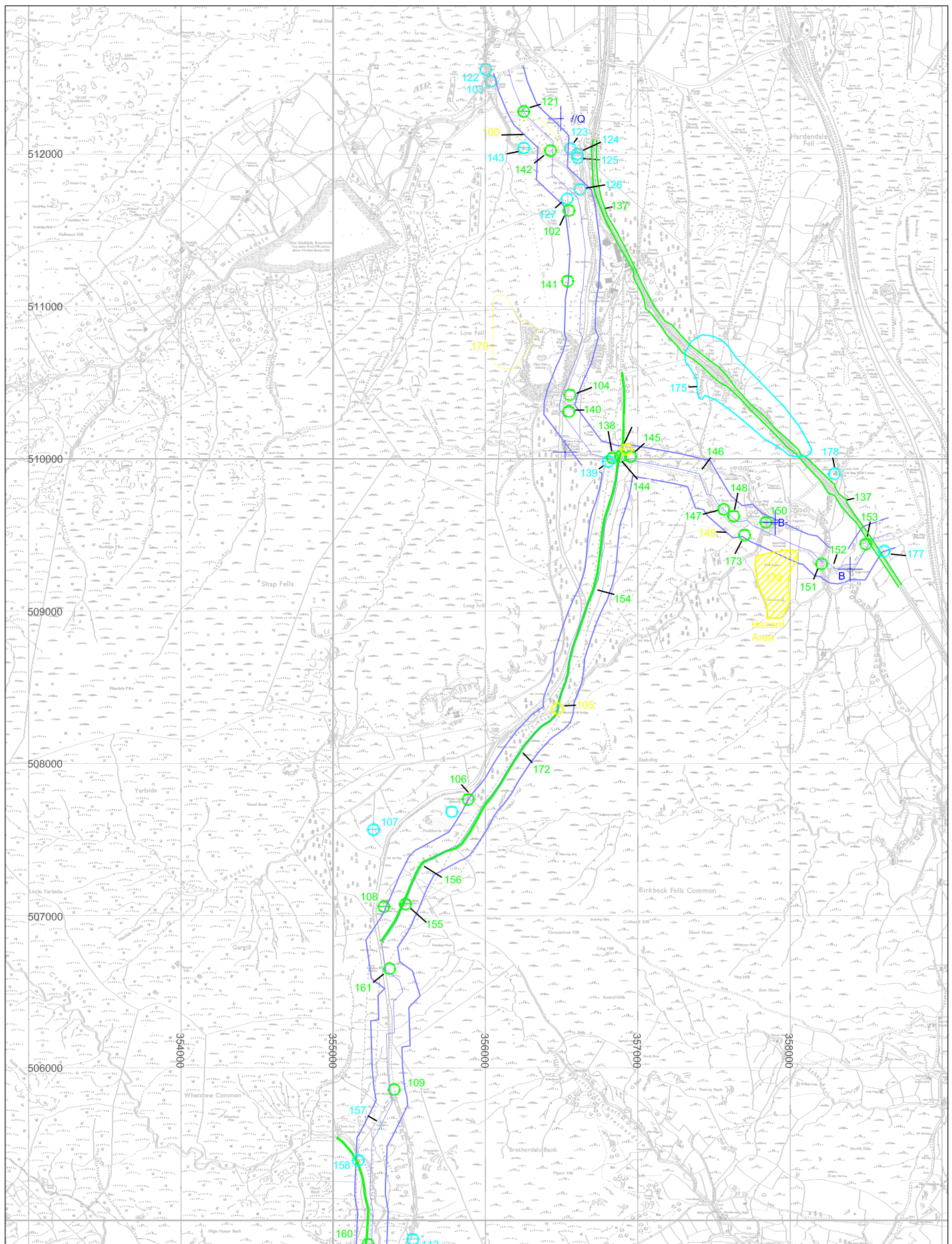


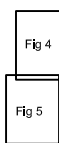
Figure 3: First Edition OS Map with the proposed pipeline route indicated, Shap to Watchgate - South




Oxford Archaeology North
 Storey Institute
 Meeting House Lane
 Lancaster
 LA1 1TF
 Tel 01524 848666
 Fax 01524 848606

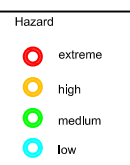
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 DRAWING No: 4
 SCALE: 1:25,000
 TITLE: North section, Gazetteer Sites
 CLIENT: United Utilities
 DRAWN BY: AJP
 DATE: February 2003

LOCATION:



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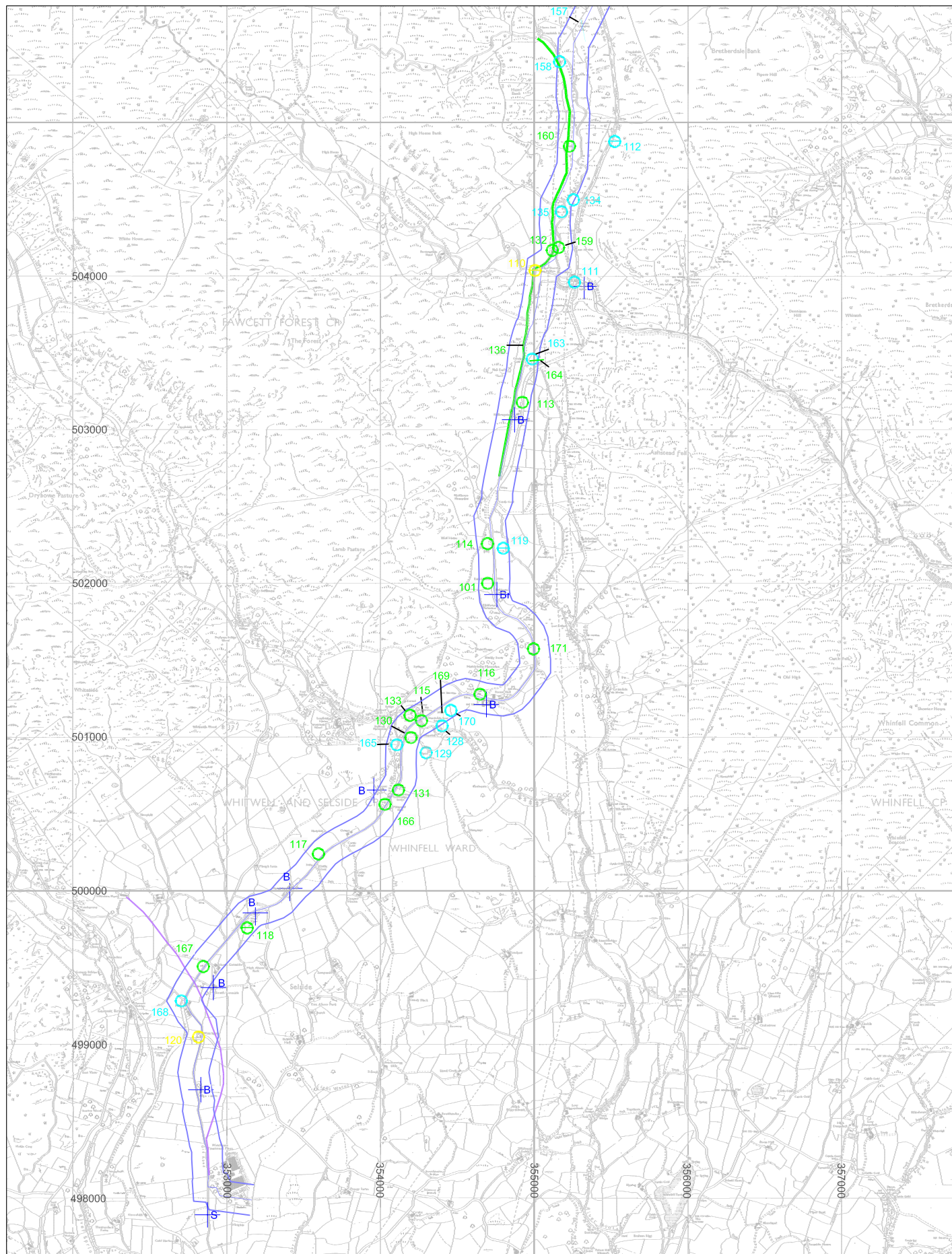
KEY



1st Edition OS sites
 B building
 W well
 S sheep fold
 F ford
 Br bridge

pipeline and corridor

Figure 4: Shap to Watchgate map, showing the proposed route, the gazetteer sites and sites noted from the First Edition OS map - North

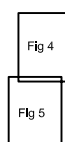



Oxford Archaeology North
 Storey Institute
 Meeting House Lane
 Lancaster
 LA1 1TF

 Tel 01524 848666
 Fax 01524 848606

PROJECT: Shap to Watchgate, Cumbria
 DRAWING No: 5
 SCALE: 1:25,000
 TITLE: South section, Gazetteer Sites
 CLIENT: United Utilities
 DRAWN BY: AJP
 DATE: February 2003

LOCATION:



0 500m

KEY	
● extreme	1st Edition OS sites
● high	B building
● medium	W well
● low	S sheep fold
	F ford
	Br bridge
	pipeline and corridor
	Watchgate-Garnett bridge

Figure 5: Shap to Watchgate map, showing the proposed route, the gazetteer sites and sites noted from the First Edition OS map - South



Plate 1: Site **100**, Turnmire Bottom A: Earthwork looking west.



Plate 2: Site **110**, High Borrow Bridge, looking west.



Plate 3: Site **149**, Wasdale Foot A: Settlement, looking south west.



Plate 4: Site **148**, Wasdale Foot B: Clearance Cairn, looking north west.



Plate 5: Site 147, Wasdale Foot: putative burnt mound