



Pooley Bridge to Shap Pipeline, Cumbria

Archaeological Survey, Evaluation and Watching Brief Report



Oxford Archaeology North

June 2005

United Utilities

Issue No: 2005-6/390

OAN Job No: L9376

NGR: NY 4781 2492 – 5615 1256

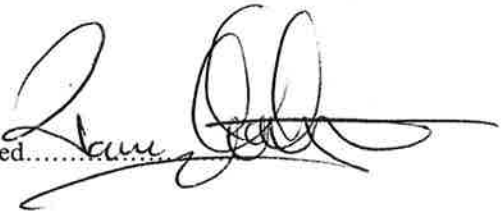
Document Title: POOLEY BRIDGE TO SHAP PIPELINE, CUMBRIA
Document Type: Archaeological Survey, Evaluation and Watching Brief Report
Client Name: United Utilities
Issue Number: 2005-6/390
OA Job Number: L9376
National Grid Reference: NY 4781 2492 – 5615 1256


Prepared by: Paul Clark
Position: Project Supervisor
Date: June 2005

Checked by: Jamie Quartermaine
Position: Project Manager
Date: June 2005

Approved by: Alan Lupton
Position: Operations Manager
Date: June 2005

Document File Location Jamie/Projects/9376pool

Signed.....

Signed.....

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

© Oxford Archaeological Unit Ltd 2005

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

Oxford Archaeological Unit Limited is a Registered Charity No: 285627

Disclaimer:

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

CONTENTS

SUMMARY	3
ACKNOWLEDGEMENTS.....	4
1. INTRODUCTION.....	5
1.1 Circumstances of the Project	5
1.2 Pooley Bridge to Shap Section	6
1.3 Historical and Archaeological Background	6
2. METHODOLOGY.....	11
2.1 Project Design.....	11
2.2 Topographic Survey.....	11
2.3 Trial Trenching	12
2.4 Watching Brief.....	12
2.5 Finds.....	13
2.6 Damage Appraisal.....	13
2.7 Archive.....	13
3. TOPOGRAPHIC SURVEY RESULTS	14
3.1 Survey Site Description	14
4. EVALUATION AND WATCHING BRIEF RESULTS	15
4.1 Introduction.....	15
4.2 Trial Trenching Results.....	15
4.3 Watching Brief.....	18
4.4 Finds.....	18
5. APPRAISAL OF DAMAGED SITES ALONG THE ASKHAM FELL BRIDLE WAY.....	21
5.1 Introduction.....	21
5.2 Archaeological Remains along the Route of the Bridle way	22
5.3 Damaged Sections of the Bridle Way	24
6. DISCUSSION.....	26
6.1 Discussion	26
7. BIBLIOGRAPHY	29
7.1 Primary and Cartographic Sources	29
7.2 Secondary Sources	29
APPENDIX 1: PROJECT DESIGN.....	31
APPENDIX 2: TRENCH DESCRIPTIONS	37
APPENDIX 3: CONTEXT LIST.....	57

APPENDIX 4: FINDS SUMMARY 58

ILLUSTRATIONS AND PLATES 59

 Illustrations 59

 Plates 59

SUMMARY

In 2002, Oxford Archaeology North (OA North 2003) was commissioned by United Utilities to undertake a walk-over survey and produce an archaeological assessment along the route of a proposed pipeline in central Cumbria. This assessment indicated that each of the two sections of pipeline, one between Bankwood and Raisbeck across the Eden Valley (NY 6437 0758 - 7317 1948) and the other between Pooley Bridge and Shap (NY 4781 2492 - 5615 1256), ran across areas of high archaeological potential, which contained monuments dating from the Neolithic period to the present, including a number of Scheduled Monuments. Following on from the assessment and walk-over survey, a programme of archaeological survey was undertaken of selected monuments identified during the assessment. OA North then conducted an evaluation of the section of proposed pipeline route running from Pooley Bridge to Shap, between 19th April and 17th May 2004. Subsequent archaeological monitoring took the form of a watching brief during groundworks between 17th June and 13th August. This document outlines the results of the evaluation, the survey and the watching brief, while the work undertaken between Bankwood and Raisbeck is covered by a separate report (OA North 2004).

A topographic survey of four selected sites identified during the earlier walk-over was undertaken. These comprised a section of a bank at Site 73, part of the wider complex of earthworks at Bampton; Site 125, a 93m-long section of the discontinuous Setterah Park curvilinear earthwork which extends from the line of the park boundary; Site 127, a 235m-long linear earthwork of uncertain function within the Helton Village Hazard Area; and Site 128, an area of ridge and furrow 115m by 65m in extent and lying to the east of Helton.

The evaluation comprised the excavation of a hundred 20m x 2m trial trenches along the length of the proposed route, with roughly three quarters of these trenches targeting sites of known archaeological potential. These located two areas of archaeological interest: in the Helton area, two trial trenches (Trenches 32 and 34) contained archaeological remains, comprising two undated cobbled surfaces (one sealing the other) and a putative bank. Within a single trench (Trench 46) in Setterah Park, an undated linear feature interpreted as a ditch was recorded.

The watching brief was focused upon six areas identified as being of high archaeological potential during the assessment and evaluation stages of the project and also targeted the supposed Roman road near Celleron which was believed to lie beneath an extant farm track. A small wall was uncovered to the south of the track but there was no indication that the track itself was of any great antiquity.

The relatively low density of features may appear somewhat unusual, but it should be noted that the pipeline route had undergone a number of revisions specifically to avoid known archaeological sites.

During the construction of the Hayeswater Pipeline, a bridle way across Askham Fell was used inappropriately by heavy vehicles. As a result, there was physical damage to the bridle way and to several of the archaeological features that are transected by the route of the bridle way. The sites along the line of the bridle way include High Street Roman road, several post-Roman boundary features and the Cockpit stone circle.

ACKNOWLEDGEMENTS

Oxford Archaeology North would like to thank United Utilities for commissioning the project and Kate Brown of MWH for her assistance in the field. Thanks must also go to our skilful and patient digger driver, Andrew from Pat O'Malley.

The evaluation was undertaken by Paul Clark, Nicola Gaskell, Martin Sowerby, Chris Ridings and Pip Kok. The watching brief was undertaken by Paul Clark, Jason Clarke, Paul Gajos, Dave McNicol and Matt Town. The survey was undertaken by Paul Gajos and written-up by Peter Schofield. The report was written by Paul Clark, Paul Gajos and Stephen Rowland, while the drawings were created by Christina Robinson. The report was edited by Alan Lupton and Jamie Quartermaine, who also managed the project.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 **Initial Assessment:** in response to a proposal by United Utilities to lay sections of new pipeline between Ullswater and the Eden valley, Cumbria County Council Archaeological Service (CCCAS) and the Lake District National Park Authority (LDNPA) requested that a programme of archaeological assessment be undertaken by Oxford Archaeology North (OA North) in advance of the works. This assessment comprised a rapid desk-based assessment in conjunction with a rapid identification survey (OA North 2003), and was intended to appraise the likely archaeological value of the specified area, and to locate and record potentially important features in the landscape, whether or not they were visible as surface remains. This examined two sections of pipeline route, that between Pooley Bridge and Shap (NY 471 220 – NY 561 126) (Fig 1), and that between Bankwood and Raisbeck (NY 6437 0758–7317 1948). Following on from this, CCCAS and LDNPA required that a topographic survey be undertaken to provide a mitigative record of the surface features that would be affected by the pipeline and that a programme of archaeological evaluation be conducted to examine the below ground potential of the pipeline route. To this end, a project design was prepared by OA North (*Appendix 1*) defining the programme and this was sanctioned by CCCAS and LDNPA. The present report incorporates the results of the topographic survey and of the evaluation for the Pooley Bridge to Shap section of pipeline route only, while those from Bankwood to Raisbeck are reported in another document (OA North 2004).
- 1.1.2 **Topographic Survey:** following on from the assessment and walkover survey, the project design recommended the recording of 12 earthwork sites by topographic survey before their potential destruction. In the event some of these were preserved by re-routing or were not going to be affected by the proposed pipe laying (Sites 71, 115, 116, 117, 118, 133, 138 and 139) and, therefore, were not surveyed. In the event, four sites were subject to detailed topographic survey (Sites 73, 125, 127 and 128).
- 1.1.3 **Evaluation:** the project design defined the requirements for an archaeological evaluation of selected sites in advance of the groundworks associated with the laying of the proposed pipeline; it recommended the excavation of 76 trial trenches measuring 20m x 2m in known areas of archaeological potential, along with a further 50 more speculative trenches of similar dimensions that attempted to locate areas of undiscovered archaeological remains. In the event, a total of 100 trenches was excavated, which included all 76 of the trial trenches in areas of known archaeological potential but for reasons of restricted access, only 24 of the speculative trenches.
- 1.1.4 **Watching Brief:** following the evaluation, it was recommended that seven areas of high archaeological potential along the route of the proposed pipeline be subject to an archaeological watching brief. This included the possible route of the Roman road near Celleron and areas of possible medieval activity around the villages of Askham and Helton and Shap Abbey.

- 1.1.5 **Damage Appraisal:** following the construction of the pipeline, it was brought to the attention of OA North that a bridle way across Askham Fell had been used inappropriately by heavy vehicles. An OA North archaeologist was duly dispatched to appraise the nature and extent of any damage to the bridle way and to any of the archaeological features traversed by, or adjacent to, the bridle way.
- 1.1.6 The topographic survey and evaluation were carried out between 19th April and 17th May 2004, the watching brief between 17th June and 13th August 2004 and the damage appraisal in March 2005. This report sets out the results of the topographic survey, archaeological evaluation and watching brief, which was undertaken in accordance with the project design (*Appendix 1*), and also the damage appraisal of archaeological features along the route of the Askham Fell bridle way.

1.2 POOLEY BRIDGE TO SHAP SECTION

- 1.2.1 **Location:** the proposed pipeline extends from Pooley Bridge to Shap (NY 4781 2492 - 5615 1256) and runs through the areas around the villages of Celleron, Askham, Helton, Bampton and Rosgill. The proposed pipeline has a total length of c11 km, and from Pooley Bridge is initially aligned broadly east/west, turning to south-east/north-west in the vicinity of Celleron. Just north of Helton, the route turns to broadly north/south, before turning to east/west, just to the north of Bampton. This course is followed for about two kilometres, before turning to south-east/north-west. To the north-west of Shap the route takes its final turn, to north/south, albeit with a fairly substantial dogleg.
- 1.2.2 **Topography:** the route of the pipeline falls within two separate areas as defined by the Countryside Commission (1998), namely the Cumbria High Fells at the northern end of the scheme and the Orton Fells for the remainder. The landscape along the scheme consists predominantly of 'rolling upland farmland' (*op cit*, 56) with a well-defined field pattern, bounded by high limestone walls (*ibid*). The land along the scheme is in the range of 175-285m OD.
- 1.2.3 **Geology:** the solid geology of the area consists of rocks of Lower Carboniferous age, predominantly limestone, although there are also beds of sandstone and shale present (Countryside Commission 1998, 57). The overlying drift geology consists of glacially deposited boulder clay (*ibid*), consisting of two series, the Brickfield 2 (a Cambic stagnogley soil) and the Waltham (a typical brown earth) (Ordnance Survey 1983).

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 1.3.1 The historical background of the area impacted upon by the proposed pipeline has been studied and assessed in the earlier assessment (OA North 2003). However, the background to those sites and areas that were specifically targeted by the archaeological evaluation will be mentioned briefly below.
- 1.3.2 **Shap Stone Avenue:** the surviving standing stones of the Shap Avenue are dated to the Late Neolithic period by analogy with more securely dated

monuments (Clare 1978). The site is a Scheduled Monument (Number 22496) and includes 14 individual stones in the Shap area, but there were certainly many more which have not survived, and the extant section extends over 3km (Burl 1993, 47). Antiquarian accounts (Nicholson and Burn 1777; Hall 1824) clearly show that the stones were being broken up for use in buildings or to clear land for enclosure and agriculture in the late eighteenth and early nineteenth centuries. A survey of stones with similar geological sources and size, undertaken in 1972, indicates that others may survive but not *in situ* (Burl 1993). Thomas Routh, working in 1743 as William Stukeley's surveyor (responsible for planning and surveying Avebury and Stonehenge), commented that the Shap Avenue possibly turned just north of the Goggleby Stone, and that the avenue had an appearance of being a double row (Lukis 1894, 314). The antiquarian sources suggest that there may have been three avenues (double rows of stones) centred on the Shap area, one aligned north-west/south-east by Skellaw cairn, one north-west of Knipe Scar, and the third aligned north/south, south of Shap and aimed at Kemp Howe stone circle. It is also possible that the avenue north of Kemp Howe may instead have been two single rows (Burl 1993, 101). The conflicting interpretations are a direct result of an imperfect record resulting from interference with, and demolition, of some of the sites.

- 1.3.3 There is also an avenue, orientated north-west/south-east, on Moor Divock, which links an alignment of large funerary monuments. While the extant section of the stone avenue is relatively short, the alignment of funerary monuments extends over 2km (Quartermaine and Leech forthcoming). The alignments of the avenues at Shap and Moor Divock are very approximately orientated towards each other and it is possible that the two north-west/south-east alignments may have formerly been part of a more extensive landscape, either as an extended avenue of stones, or as a former communication route marked by occasional monuments. This premise is also suggested by antiquarian references to local knowledge suggesting that the stone alignment extended between Shap and Moor Divock (Ferguson 1894). If there was a contemporary association between the two avenues, then the pipeline route will cross the projected alignment in the area north of Bampton, raising the possibility of extant sub-surface remains of prehistoric activity in this area. This possibility was examined by nine trenches (Trenches 44-52) (Fig 9). The possibility of the Shap Avenue extending further to the north-west than currently recorded was also investigated by the excavation of fourteen evaluation trenches (Trenches 74-87) (Fig 12) immediately to the north-west of High Buildings Farm.
- 1.3.4 **Roman Road near Celleron:** High Street Roman road runs between Ambleside and Brougham (Margary 1973). This route appears to have continued in use until the post-medieval period, and can be determined from the variety of finds found at well-established sites along the route. The route of the proposed pipeline cuts across the interpolated route of the Roman Road immediately to the south of Celleron, and was evaluated by four trenches (Trenches 7-10) (Fig 6).
- 1.3.5 **Shap Abbey:** the proposed route of the pipeline infringes upon the curtilage of the Shap Abbey, and earthworks relating to the abbey, including Sites 116-118, were tentatively identified during the walkover survey. There is also a well-

developed dyke system around the western side of the Abbey (LUAU 2000, *Section 4.2.24*) which is likely to have been defined the curtilage of the abbey precinct (*op cit*, *Section 6.6.18*). Shap was the site of the Abbey of St Mary Magdalene, a house of Premonstratensian or 'White' Canons, and the only Norman abbey in Westmorland. It was originally founded in c1191 at Preston Patrick in Kendal, some 20 miles south of Shap, by Thomas de Workington. The founder was apparently still alive in c 1201 when the House wished to move to *Hepp* (Shap) (Butler and Given-Wilson 1979, 344). In addition to their ecclesiastical duties, the Canons of Shap Abbey were also major landowners in the area and as such, their administrative and financial interests would have affected much of the region. Even at its most populous the Abbey housed only 20 Canons (there may have been extra lay-members); however, it evidently controlled much of the surrounding area extending from Shap westwards towards the north-east bank of the old Haweswater lake and then southwards to include Swindale and Sleddale. Of greatest impact on the farming landscape were the Abbey granges, often characterised by large-scale farming and huge barns for harvest stores (in this area often wool or hay). A notable example is at Friar Biggins Grange, Orton (SAM 23646/ HER 5054) located at the foot of Orton Scar and includes earthworks and the buried remains of a group of stone buildings flanked by enclosures. The core area of the grange includes the remains of a three-roomed rectangular building constructed of limestone. Despite its proximity to Shap this was in fact the monastic grange associated with the Friary of Conishead, near Ulverston, and was thought to have been constructed c1319.

1.3.6 **Medieval settlement around Askham and Helton:** the layouts of Askham and Helton appear to lack a village green but instead show development along a single main road. As such, they share a number of similarities with planned, nucleated settlements of the medieval period, many of which in Cumbria date from the twelfth century onwards (Roberts 1993). Although the rapid appraisal did not reveal any information about the founding of the villages, it established, through references in medieval documents, that there were settlements at these locations from at least the twelfth to thirteenth centuries (CCCAS nd). There are many villages in the Eden Valley which have the fossilised remains of a former 'open-field' system around them (Butlin 1993, 173); these consisted of large open arable fields, in varying combinations of three or four, which were communally managed and rotated in terms of produce grown, grazing use or lying fallow. Such areas using this farming practice were usually larger areas of fertile, arable land in lowland regions. The modern field system of Helton is of interest, as the slightly sinuous field boundaries on the more gently sloping land to the east indicate the division of the medieval strips, belonging to the open fields, into enclosures; their curved alignments follow the aratral-shaped ridge and furrow marks caused by ox-drawn ploughing. It should be emphasised that not all ridge and furrow is of medieval date, and some is a product of later ploughing; however, the form of the ridge and furrow often discriminates between ox ploughing, typical of the medieval period, from horse-drawn ploughing more typical of the post-medieval period.

1.3.7 **Askham:** despite the fact that Askham is situated on much more gently sloping land than that at Helton (the name of which means 'settlement on a

- slope' (Mills 1998), the evidence for medieval ridge and furrow does not appear to be fossilised in the modern field boundaries. At Askham the very straight field boundaries can be seen to be perpendicular to the axis of the village and to follow the alignment of individual tofts. Other features of medieval field systems, such as a back lane (a subsidiary lane lying parallel to the main road and separating the tofts from the strip fields), and toft or field 'vennels' (connecting the main road and the back lane) (Roberts 1993, 141) are not immediately apparent, although the routes of public footpaths, particularly around Askham, may utilise these ancient thoroughfares.
- 1.3.8 The assessment report (OA North 2003) noted that research into plans of the villages along the pipeline route had identified visible earthworks on either side of the main streets of many of the villages, including both Askham and Helton. The existence of these earthworks indicates that the present villages have either shrunk from their former, larger extent, or that the focus of the settlement has moved (*ibid*), which accounts for the survival of the earthworks. Such earthworks are moderately extensive around the villages and can be seen clearly on aerial photographs and also at ground level. This preservation of the field pattern and earthworks within the villages relates to the well-established pattern of shrunken villages within the Eden Valley. Population decrease resulting from the various disasters of the fourteenth century, which included plague, diseases of livestock, and the incursions of Scots from across the border (Winchester 1987, 44-45), would have been hard to recover from within a marginal environment (Roberts 1993).
- 1.3.9 The route of the proposed pipeline ran along the western edge of Askham, where it was evaluated by ten trenches (Trenches 15-24) (Fig 7) and through practically the middle of Helton, where eleven trenches were located (Trenches 28-38) (Fig 8).
- 1.3.10 **Field Systems to the east of Bampton:** traces of cultivation strips, field boundaries and ridge and furrow have been identified within this area, relating to medieval, and possibly later, farming practices. Four trenches (Trenches 61-64) were located in this area to assess the earthworks (Fig 11).
- 1.3.11 **Setterah Park:** Setterah Park, originally a medieval deer park, has been identified from cartographic sources as enclosing an area of some 128 hectares, which would make it relatively large, as the average size for a deer park of this period was probably between 40 and 80 hectares (Lasdun 1991, 11). The close link between deer parks, hunting and the social elite can be seen by the presence of a moated manor house near the park's northern apex. Parks of this period typically had an elliptical or circular shape as these were the easiest and most economical area to enclose (*ibid*). The road between Helton and Bampton can be seen to form the western side of this elliptical enclosure with Heltondale Beck and the River Lowther forming the natural boundaries to the south and east respectively. The position of the park's northern boundary is not entirely clear, but Ignes Lane seems to be a good candidate. The western edge of the park, having no natural boundary, is the most likely to have surviving traces of the park pale, a fence surmounting a bank with a ditch to prevent the escape of deer; it is this area that is at direct risk from the proposed route. The pipeline route through the area of Setterah Park was evaluated by five trenches (Trenches 39-43) (Fig 8).

- 1.3.12 **Communications:** there is evidence for the remains of medieval routeways within the general area of the pipeline, and there is the potential that this rudimentary communication system would have been in part developed by the abbey, as the Canons of Shap Abbey would have needed to travel to and from their administrative and diocesan centre of Carlisle and would have needed to transport goods to and from the market centres of Penrith and Kendal. There are possible remains of bridge footings dating to this period (Site 90), and the pipeline corridor encompasses several transport elements which date to the medieval period, including a cross site (Site 39). Other sites, such as stepping stones across becks (Site 64), are of unknown date and could be medieval or even earlier. The possibility of the pipeline impacting upon remains relating to the abbey led to the excavation of six evaluation trenches (Trenches 88-93) (Fig 12).
- 1.3.13 **Post-medieval communications:** a significant development of the seventeenth to nineteenth century period in the Shap area was that of wheeled traffic, in conjunction with the turnpiking of the Old Shap Road in 1753 (up to this point most traffic between Kendal and Penrith had travelled by pack horse up the Kentmere valley, over the Nan Bield Pass and into the Haweswater valley; LUAU 1997b). The road continued from Kendal to Penrith, skirting east of the valleys of Longsleddale and Swindale, encouraging the development of the market town of Shap. Later, in the nineteenth century, the route enabled the development of large-scale quarrying for Shap granite, slate and limestone. A sunken trackway at Rosgill has been identified within this area during the walkover survey; it was evaluated by four trenches (Trenches 68-71) (Fig 11).
- 1.3.14 **Post-Medieval Quarries between Brampton and Shap:** the areas between Brampton and Shap are dominated by numerous post-medieval quarry sites and associated lime kilns, some of which survive in good condition. There were at least nine main quarries and 12 lime kilns adjacent to the line of the pipeline (OA North 2003). 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, to produce lime.

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 A project design (*Appendix 1*) was submitted by OA North to United Utilities for an archaeological evaluation along the Shap to Pooley Bridge Shap section (NY 471 220 – NY 561 126) of the Hayeswater pipeline. The work provided for a topographic survey of selected sites, trial trenching, which was for the most part targeted on sites identified by the earlier appraisal (OA North 2003) and, a watching brief during topsoil stripping targeted on areas highlighted by the evaluation as needing further work.
- 2.1.2 The project design for the appraisal of the Hayeswater pipeline was produced in accord with a verbal brief from Eleanor Kingston of the Lake District National Park Authority (LDNPA) and was agreed with the CCCAS. The project design was adhered to in full and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 TOPOGRAPHIC SURVEY

- 2.2.1 **Instrument Survey:** a level 2b survey (OA North 2002a), equivalent to RCHM(E) level 2, was undertaken of the sites identified by the appraisal, and a total of twelve sites were recommended as requiring topographic survey within the project design (*Appendix 1*): Sites 71, 73, 115, 116, 117, 118, 125, 127, 128, 133, 138, 139.
- 2.2.2 By the time the archaeological programme was undertaken eight of the sites initially identified as requiring topographic survey (Sites 71, 115, 116, 117, 118, 133, 138 and 139) no longer fell within the revised route of the pipeline easement and, therefore, did not require any survey. Consequently, the following Sites: 73, 125, 127 and 128 were ultimately surveyed (Figs 2-5).
- 2.2.3 **Control:** survey control was established over the site by closed traverse and internally was accurate to +/- 15mm; the control network was located onto the Ordnance Survey National Grid by the use of Global Positioning Survey (GPS), which is accurate to +/- 0.25m.
- 2.2.4 **Detail:** the surface features were surveyed by EDM tacheometry using a total station linked to a data logger, the accuracy of detail generation being appropriate for a 1:500 output. The digital data was transferred onto a portable computer for manipulation and later transferred to other digital or hard mediums. Film plots were outputted via a plotter. The archaeological detail was drawn up in the field as a dimensioned drawing on the plots with respect to survey markers. The survey drawings were generated within a CAD system and were merged with existing topographic data, and with the results from earlier surveys.
- 2.2.5 **GPS Survey:** in lower order sites and to provide topographic detail, survey was undertaken using a post-processed differential GPS, which is accurate to

250mm. The data was then combined with the instrument survey data, plotted and was subject to manual enhancement.

2.3 TRIAL TRENCHING

- 2.3.1 The project design (*Appendix 1*) provided for the excavation of 76 trenches centred on sites of known potential and 50 further speculative trenches, designed to identify any previously undiscovered archaeology. In the event a total of 100 trenches was excavated, which included all 76 of the trial trenches in areas of known archaeological potential but for reasons of restricted access, only 24 of the speculative trenches.
- 2.3.2 The trenches were excavated by a combination of mechanised and manual techniques; the topsoil was removed by mechanical excavator, fitted with a 1.7m wide toothless bucket. The machine excavation did not intrude into any potential archaeological stratigraphy and all machine excavation was undertaken under careful archaeological supervision. Assessment of service plans was undertaken to avoid live services. Following mechanical excavation the floor of the trench was cleaned by hoe and manual excavation techniques were used to evaluate any sensitive deposits, enabling an assessment of the nature, date, survival and depth of deposits and features. In accordance with the project design, trenches were excavated to the level of the natural and to accommodate health and safety constraints, were no deeper than 1.2m.
- 2.3.3 The trenches were excavated in a stratigraphical manner, whether by machine or by hand. The trenches were located by use of GPS equipment that is accurate to +/- 0.25m. Archaeological features within the trenches were planned by manual techniques.
- 2.3.4 **Recording:** all information identified in the course of the site works was recorded stratigraphically, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records were available for inspection at all times. Results of the field investigation were recorded using a paper system, adapted from that used by the English Heritage Centre for Archaeology. The archive includes both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:50, 1:20, and 1:10). All artefacts and ecofacts were recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.

2.4 WATCHING BRIEF

- 2.4.1 To ensure the recovery of all possible archaeological information it was recommended that a permanent presence watching brief be undertaken during the course of the topsoil strip for the scheme in the areas immediately surrounding the three trenches (Trenches 32, 34 (Plates 2-3), and 46) found to contain archaeological features. Given the proximity of the features in Trenches 32 and 34 and the sensitive nature of the Helton Hazard Area, it was further recommended that a watching brief be maintained across the whole of this area. Given that it was not possible to put evaluation trenches across the modern day track at Celleron, believed to overlie the putative Roman road, a

watching brief was also undertaken at this site during the course of the groundworks, when these crossed the farm track. Further watching briefs were required in the area to the north-west of Bampton Hall, to identify any possible medieval remains, and also in the area across the current end of the Shap stone avenue, where there was a potential continuation of the avenue. Similarly, a watching brief was maintained in the area immediately adjacent to Shap Abbey. Finally, the southernmost area of the scheme, close to the Kemp Howe stone circle at the southern end of the Shap stone alignment, was also subject to a watching brief because of the potential for prehistoric features in this area.

- 2.4.2 The topsoil strip was carried out using a mechanical excavator fitted with a 2m wide toothless bucket. Observation of the work was undertaken, as well as the examination of any soil horizons exposed, and the accurate recording of all archaeological features, horizons and any artefacts found during the excavations.
- 2.4.3 **Recording:** the recording comprised a full description and preliminary classification of features or materials revealed, on OA North *pro-forma* sheets, and their accurate location, either on plan and/or section. Records were kept of all the sections of the watching brief even if the results were negative. All areas of archaeological interest were fully photographed, both in general terms and in specific details.

2.5 FINDS

- 2.5.1 **Artefacts:** all finds recovered were bagged and recorded by context number, retained for assessment, processed and stored according to current standard practice based on guidelines set by the Institute of Field Archaeologists (IFA 1992). The finds have been analysed by the OA North in-house specialist (*Section 3.4*).

2.6 DAMAGE APPRAISAL

- 2.6.1 The damage appraisal of the Askham Fell bridle way was undertaken in a similar manner to a walkover survey. Areas of damage were identified, located with the use of a GPS and recorded by brief notes and photographically.

2.7 ARCHIVE

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

3. TOPOGRAPHIC SURVEY RESULTS

3.1 SURVEY SITE DESCRIPTION

- 3.1.1 **Site 73, Bampton Earthworks (Figs 2 and 3):** Site 73 consists of a large complex containing traces of cultivation strips, field boundaries and ridge and furrow cultivation. The majority of the site is located on the south-west side of the road and outside the footprint of the pipeline easement (Site 73a), consequently this has not been subject to topographic survey. A small portion of the earthworks falls within the pipeline easement (Site 73b) and only those features directly impacted upon by the pipeline were recorded. The surveyed earthwork features consisted of a bank standing approximately 0.5m high by 4m wide which extended for 24m from the south-east to the north-west where it opened out into a level area measuring approximately 14m long by 5m wide. To the immediate west of this level area the ground dropped by approximately 0.5m to another levelled area again measuring approximately 14m by 5m.
- 3.1.2 **Site 125, Setterah Park Earthwork (Figs 2 and 4):** this is an interrupted curvilinear earthwork that extends out from the line of the Setterah Park boundary. It follows a line for c36m, on an east/west orientation before turning to the north-east and continuing for a further 57m. The earthwork is between 2.5m and 3m in width and stands to a maximum height of 0.6m; it is very denuded and contains occasional boulders. There is a 25m gap between the western edge of the earthwork and the park boundary, which may be a real gap or it is possible that the earthwork does not survive as a surface feature over this area. There is a possibility that the earthwork had a relationship with the park boundary, which has a medieval origin; however, given the uncertainty of this relationship and that the boundary has continued in use through to the present, there is no indication as to the date of the earthwork.
- 3.1.3 **Site 127, Helton Earthwork (Figs 2 and 5):** Site 127 comprises a large linear earthwork approximately 10m wide and 2.5m high with a flat area 3m wide along its crest. There are no stones visible within the bank. The earthwork extends from the road for 180m to the east then turns through 90° to the north, continuing for a further 40m before turning to the east for another 15m where it terminates in an area of flat ground. It is entirely within a linear strip field and is cut by the Helton to Bampton road at its western end; it is within the Helton Village Hazard Area. The function of the earthwork is uncertain, but probably relates to a former field system.
- 3.1.4 **Site 128, Helton Ridge and Furrow (Figs 2 and 5):** this is an area of ridge and furrow in the enclosed strip fields to the east of Helton, which is 115m by 65m in extent. The ridges and furrows are orientated east/west and run parallel to the extant strip field boundaries to the north and south. Only three actual ridges were clearly evident, all of which lie on the down-slope side of the ridge running at right-angles to the natural slope of the field. However, it is possible to discern very faint furrows spaced approximately 6m apart across the whole of the area. The plot boundaries correspond with the house plots on the west side of the road and it is probable that these were associated with former crofts in the medieval village.

4. EVALUATION AND WATCHING BRIEF RESULTS

4.1 INTRODUCTION

4.1.1 Of the 126 proposed trenches along the line of the pipeline, 100 evaluation trenches (20m x 2m in size) were in the event excavated. The remaining 26 unexcavated trenches could not be implemented because of access restrictions. The results of the trial trenching are presented below, with individual trenches grouped by geographical location. Negative results are treated more generally, while trenches within which archaeological features or deposits were found are described in more depth. Individual descriptions for every trench are presented in *Appendix 2*. Despite the fact that the majority of trenches were targeted towards areas of higher archaeological potential, very few archaeological features were found. Such features were recorded in Trenches 14, 27, 32, 34, 46, 98 and 99, but only those identified in Trenches 32, 34 and 46 can be considered to be of any real significance.

4.2 TRIAL TRENCHING RESULTS

- 4.2.1 **Celleron Road:** Trenches 1-5 (Fig 6) were positioned at roughly equal intervals over a length of c1.5km immediately to the south (or, in the case of easternmost Trench 6, immediately to the north) of the Pooley Bridge to Celleron Road. Trench 3 was located near to a clearance cairn (Site 137) which was just beyond the easement corridor. Topsoil in each of the trenches was found to be relatively shallow (0.2m-0.3m deep) and Trenches 1 and 2, located at the west limit of the pipeline section, revealed deep deposits of hill wash overlying boulder clay; that in Trench 2 exceeding 1.2m in depth. Subsoil varying from 0.5m-0.9m thick was recorded in Trenches 3 and 6, but in all other cases boulder clay was encountered immediately below the topsoil horizon. No archaeological features were encountered in any of these trenches.
- 4.2.2 **Roman Road near Celleron:** four trenches (Trenches 7-10) (Fig 6) were positioned to the south-west of South Celleron Farm, along a length of c200m, to straddle the projected route of the Roman Road (Site 35). It was not possible to put any trenches across the track to Winder Hall, which is the actual line of the suggested Roman road, as the access to the farm needed to be kept open; instead, this short section of track was examined as a watching brief (*Section 4.3.5*). No archaeological features were identified within these trenches and the depth of subsoil deposits, between the 0.3m-0.4m thick topsoil and the boulder clay natural, varied from trench to trench (*Appendix 2*).
- 4.2.3 **Between Celleron and Askham:** Trenches 11-14 (Figs 6 and 7) examined a length of roughly 1km of pipeline, running north-west/south-east along the south-west side of the Celleron to Askham road. Trenches 11-13 were excavated to the boulder clay natural without encountering any archaeology. Trench 14, located in a field east of Limekiln Plantation and situated on limestone bedrock, revealed evidence for a disused field boundary, aligned roughly east/west. This raised bank feature comprised small to medium sub-

rounded to rounded stones set in a matrix of light-yellowish sandy clay. The orientation of the boundary is at a skewed angle to the present day field boundaries and it would appear to be a component of an earlier field system.

- 4.2.4 **Askham Village:** eleven trenches (Trenches 15-25) were excavated in fields to the west of the Askham Hazard Area and investigated a length of c1km of pipeline (Fig 7). No archaeological features could be identified although evidence for a 0.95m deep layer of hill wash was encountered in Trench 25. Trenches 15-17 to the north were on a limestone bedrock natural, whilst those to the south had a boulder clay natural.
- 4.2.5 **Helton Village:** 11 trenches (Trenches 28-38) were excavated along a c700m length of pipeline within the village of Helton, with two more (Trenches 26 and 27) placed between 300m and 500m north of the Helton Hazard Area (Fig 8). The depth at which the boulder clay natural was encountered varied somewhat, ranging from 0.3m (Trench 27) to 1.3m (Trench 30), and in most instances no subsoil was recorded; that in Trench 30 was identified as hillwash. Trench 27 contained a single feature, a stone-filled land drain, aligned broadly north-east/south-west. Within the hazard area, Trenches 32 and 34 contained archaeological remains. The topsoil within Trench 32 consisted of mid-greyish-brown clayey-silt to a maximum depth of 0.45m and it directly overlay the natural geology, which consisted of a mid-orange-brown boulder clay at both the southern and northern ends of the trench. In the middle section of the trench, a modern concrete drain was observed running east/west, and a number of large sub-rounded boulders were also exposed (Plate 1). There was no obvious structure to these boulders, although they were in the correct position to form part of a large bank identified by the walk-over survey (OA North 2003, Site 127), which was clearly seen running east/west across the field. No finds were recovered from this feature, and indeed, it remains too ambiguous to confirm that it was manmade.
- 4.2.6 The topsoil within Trench 34 consisted of dark-grey clayey-silt, had a maximum depth of 0.15m and overlay a modern sewer, two cobbled surfaces (2 and 4) and the underlying natural geology, which was only exposed in a small area to the north of the trench. The later cobbled surface (2) (Plate 2) was located at the southern end of the trench, was exposed for a length of 2.45m, and was seen extending under the southern limit of excavation. It consisted of medium well-rounded stones set into a matrix of sandy clay. A sondage was excavated through surface 2, but no finds were recovered from it. Cobbled surface 2 overlay an earlier cobbled surface, 4 (Plate 3), which, although truncated by the modern sewer trench, extended for the length of the trench, and was far more crudely constructed than surface 2. It is possible that these cobbles represent to phases of floor surfaces within a barn or similar structure (see Section 4.4.6). No finds were recovered from within this trench.
- 4.2.7 **Setterah Park:** five evaluation trenches (Trenches 39-43) were excavated along a 400m section at the north-east edge of Setterah Park (Fig 8). The depth at which the boulder clay was encountered varied from 0.3m to 0.55m and was surmounted by a layer of subsoil and a thin topsoil horizon. No archaeological features were recorded.

- 4.2.8 **Helton to Bampton Road:** Trenches 44-50 were located along the west and south-west boundary of Setterah Park for a length of c600m on the east side of the Helton to Bampton Road; Trenches 51 and 52 followed this route southwards to Butterwick (Fig 9). Only Trench 46 contained any archaeology. The topsoil in this trench consisted of mid-grey-brown sandy silt, with a maximum depth of 0.4 m, and directly overlay the light-yellowish-orange sandy gravel natural. A single linear feature, 8, (Plate 4) was observed in this trench, running broadly east/west. It was exposed for a length of 1.8m and measured 0.9m wide by 0.16m deep. No finds were recovered from the single fill of the feature, which consisted of light grey-brown clayey-silt, and the feature thus remains undated.
- 4.2.9 **Butterwick and the Butterwick to Bampton Road:** Trenches 53 and 54-55 (Fig 10) were excavated in Butterwick and to the east side of the Butterwick to Bampton Road. The clay sand natural was encountered at between 0.4m and 0.65m but no archaeological features or finds were observed.
- 4.2.10 **Bampton and Bampton Grange:** twelve trenches (Trenches 56-67) were excavated along a stretch of c3km on the north and east sides of the Bampton to Rosgill road (Figs 10 and 11). Three of these trenches, 61-64, were positioned to investigate field systems to the east of Bampton identified during the walkover survey (Figs 6 and 11). The natural, which varied between sandy clay, boulder clay, river gravel and limestone, was encountered at depths between 0.3m and 1.1m. No archaeological features were recorded, although a modern water pipe, feeding a trough, was observed in Trench 61.
- 4.2.11 **Trackway at Rosgill:** four trenches (Trenches 68-71) were excavated within a distance of 150m just to the north of Rosgill Head (Fig 11) and east of trackway Site 71 which had been identified during the walkover survey. The limestone or sandy clay subsoil was encountered between 0.25m and 0.55m, but no archaeological features could be identified.
- 4.2.12 **Rosgill to Shap Road:** Trenches 72 and 73 were placed within a c300m stretch on the east side of the Rosgill to Shap road, with Trench 73 located close to disused lime kiln Site 54 (Fig 12). The sandy clay natural was recorded at depths between 0.45m and 0.5m, but no archaeological features were encountered.
- 4.2.13 **Rosgill to Shap Road:** fourteen trenches (Trenches 74-87) alternately parallel and perpendicular to the axis of the pipeline route, were excavated within a c600m length of pipeline between the Rosgill to Shap road and the northern edges of the Shap Abbey hazard area (Fig 12). The limestone or sandy clay of the natural geology was encountered at depths between 0.25m and 0.75m (mostly in the region of 0.3m), and was rarely covered by subsoil. No archaeological features were recorded.
- 4.2.14 **High Buildings, Shap:** six trenches (Trenches 88-93) were located along a length of c200m to the north-east of the Shap Abbey Hazard Area, close to the position of earthwork Site 118, which may have been part of the abbey curtilage boundary (OA North 2003) (Fig 12). The natural sandy clay subsoil was generally recorded at a depth of c0.4m and was immediately overlain by the topsoil, the boundary of which was often diffuse.

4.2.15 **Locations in and around Shap:** six trenches, 94-100, were positioned across a distance of c3km (Figs 13 and 14). The sandy clay natural geology was encountered at varying depths up to 0.9m but was generally only about 0.3m deep immediately below the topsoil. Trench 96 contained a modern animal burial, while two land drains cut into the natural were observed in Trench 98 and one more in Trench 99.

4.3 WATCHING BRIEF

4.3.1 Six areas (A, B, C, D, E and F) (Figs 15 and 16) were identified as having high archaeological potential and were therefore subject to a watching brief. Areas A to E had already been stripped of topsoil, with areas D (Plate 5) and E already having had the pipe laid, prior to the commencement of the watching brief. Therefore, the bank seen in Trench 32 (Plate 1), the two cobbled surfaces seen in Trench 34 (Plates 2-3), and the ditch seen in Trench 46 (Plate 4), were not seen and had presumably been destroyed before any further recording could take place.

4.3.2 Area A, situated to the south of the Shap Avenue, was found during the walkover survey to contain a pile of stones within the easement to the east of Kemp Howe Farm. The machine had already moved the stones before the watching brief began, but it is thought that they may once have formed a clearance cairn. No further archaeological features were seen in the area.

4.3.3 Area B was located at the northern end of the Shap Avenue, adjacent to Shap Abbey. The area had been stripped of topsoil before the commencement of the watching brief, though the stripping of the subsoil during the excavation of the pipe trench was observed. No archaeological remains were encountered.

4.3.4 Three watching brief areas were located to the north of Bampton Hall (Area C), north-east of Heltondale Beck on the Bampton to Helton road (Area D) and to the east of Helton (Area E). No archaeological features or deposits were seen in any of these areas.

4.3.5 Area F was targeted on the supposed route of the Roman road near Celleron. The evaluation of this area (*Section 4.2.1*) had failed to identify any signs of the Roman road, but it was thought that the most likely position for the road was under the extant farm track (Plate 6). Therefore, a watching brief was maintained as the pipe trench cut through the trackway.

4.3.6 The excavation through the trackway (Fig 17, Plate 7) revealed a compacted layer of stones, ranging in diameter from 0.1m to 0.4m in a grey-brown sandy matrix (**101**). The deposit was 0.45m thick by 3m wide and formed the extant farm track. Below this deposit was a red-brown sandy clay subsoil (**102**) overlying limestone bedrock. No dating evidence was recovered from any of the deposits.

4.3.7 Approximately 2m south-west of the farm track, a small wall, **100** (Plate 8), was uncovered in the pipe trench. The wall only consisted of a single course of roughly-dressed, unbonded limestone, which ran for 1.5m from south-west to north-east before turning into the edge of the trench. The wall was buried under 0.7m of sandy clay containing frequent limestone blocks. No dating

evidence was recovered and the form and function of the wall remain unknown.

4.4 FINDS

4.4.1 **Introduction:** the majority of finds encountered during trial trenching and the watching brief comprised small fragments of abraded modern pottery likely to derive from night soiling and, as a result, were recorded in the field. In total, 34 artefacts and ecofacts were retained, all from topsoil *I* in Trench 34. The majority was pottery, and the remainder comprised three fragments of glass and single pieces of clay tobacco pipe, copper alloy, iron, potash, and bird bone. The type of finds recovered is summarised in Table 1, below, and all the finds are catalogued in *Appendix 3*.

Material	Quantity
Bird bone	1
Clay tobacco pipe	1
Copper alloy	1
Glass	3
Iron	1
Potash	1
Pottery	26
<i>Total</i>	<i>34</i>

Table 1: Type of finds recovered

- 4.4.2 The majority of the artefacts appear to date to the eighteenth to twentieth century, with the notable exception of one fragment of pottery, which may date to between the fourteenth and eighteenth century. Details of the pottery, which provides the most reliable dating evidence, are set out below, followed by a brief record of the other categories of finds.
- 4.4.3 **Pottery:** the numbers of fragments of different fabric-types are summarised in Table 2, below. The earliest is the fragment of green-glazed reduced fabric, which was small, abraded, and had no diagnostic features. The brown-glazed red earthenware came from domestic coarseware vessels, essentially kitchenware. The stoneware and the beige-glazed white earthenware fragments were also from domestic coarseware vessels, the former from a flagon, and the latter probably from a baking bowl or pie dish.
- 4.4.4 All the porcelain joined together as part of one undecorated saucer. In contrast, the 11 white-glazed white earthenware fragments were from ten different vessels, which included plates, ashets, bowls, jugs, and saucers. Five of these vessels were decorated, one of which was relief-moulded, one sponge-printed, and the remainder transfer-printed. The only transfer pattern identified, on a plate rim, was Willow.

Pottery type	Quantity	Date range
Green-glazed reduced fabric	1	Fourteenth - eighteenth century
Brown-glazed red earthenware	4	Late seventeenth - early twentieth century
Stoneware	1	Eighteenth - twentieth century
Majolica	1	Late eighteenth - early twentieth century
Porcelain	7	Late eighteenth - twentieth century
Beige-glazed white earthenware	1	Late eighteenth - twentieth century
White-glazed white earthenware	11	Late eighteenth - twentieth century

Table 2: Pottery types with approximate date ranges and quantities of sherds

- 4.4.5 **Other finds:** a single clay tobacco pipe stem fragment was dated to the eighteenth to early twentieth century, and parts of very light turquoise glass bottles were of a similar date. Two metal objects were recovered, a plain oval copper alloy handle with a screw thread for attachment, and a large, heavily corroded iron cone or socketed spike, which may have been part of some farm machinery or tool. A single piece of potash and the sacrum of a goose-sized bird were also recovered.
- 4.4.6 **Discussion:** the fact that only one of the 100 evaluation trenches produced any finds seems remarkable, but, considering the rural route of the pipeline, it is perhaps not that unexpected. Trench 34, from which all the finds were recovered, contained a cobbled floor area which was interpreted as possibly the floor surface of an early barn. The finds from the topsoil were domestic in nature, with the potash and iron object possibly connected with farming. With the exception of the porcelain saucer, of which a large portion was present, and comprised seven adjoining fragments, the sherd to vessel ratio was very low, and the fragments were small. Rubbish from the farm would probably have been thrown on a midden, and the finds had clearly been disturbed and scattered repeatedly before they were recovered.
- 4.4.7 The assemblage is of interest as a small rural assemblage in Cumbria, and its main interest lies in its association with a building which no longer survives. The possible medieval pottery may indicate earlier settlement on the site.

5. APPRAISAL OF DAMAGED SITES ALONG THE ASKHAM FELL BRIDLE WAY

5.1 INTRODUCTION

- 5.1.1 As a result of the unsolicited and inappropriate use of a public bridle way across Askham Fell by heavy machinery associated with the construction of the Hayeswater pipeline, it was necessary to assess the extent of damage to the bridle way and to appraise the impact on any archaeological features in the immediate area. The section of damaged bridle way runs east/west for 1km on Askham Fell between the Aik and Elder Becks, before turning sharply north towards Heughscar Hill and continuing for 500m along the route of High Street Roman Road.
- 5.1.2 **Background:** Askham Fell is a gently sloping col between Heughscar and Loadpot hills, on a ridge dividing the Ullswater and Lowther valleys. It forms a natural communication route between the two valleys and has been used as such since the prehistoric period. Much of the Fell encompasses slightly undulating, unenclosed moorland, which is edged to the north, west and east by enclosed land and to the south-west by Barton Fell, divided from Askham Fell along an arbitrary line corresponding approximately to the 360m contour. The local bedrock of the region is limestone, occasionally exposed as pavements in the higher regions and, typically, the area is pock-marked with sink-holes. The main concentrations of these are in the central, flatter parts of the col (Pulpit Holes and Wofa Holes), but there are other occasional, scattered sink holes throughout the area. There are also extensive mires and areas of poor drainage, again, mainly around the central, flat area of the col (OA North 2002b).
- 5.1.3 Askham Fell contains one of the most important concentrations of prehistoric activity in Cumbria, with the earliest evidence dating from the Mesolithic (Cherry and Cherry 2002, 4). Almost all the monuments, which are mostly located on the slightly higher, better drained ground, date from the Neolithic and Bronze Age, and owe their preservation to the fact that the marginal environment of their surroundings has attracted little modern activity beyond pastoral farming. Within Askham Fell, Moor Divock (c900m to the east of the bridle way) forms the intersection of several communication routes (including the north-east/south-west route corresponding to the line of High Street Roman Road), and is the focus of several substantial prehistoric monuments (Quartermaine and Leech forthcoming). These include the Neolithic Cockpit stone circle and the Moor Divock stone avenue, along with a series of Bronze Age features, comprising massive round and kerbed cairns, a stone avenue, a ring cairn, standing stones, and several cairnfields (OA North 2002). The arrangement of prehistoric monuments along and around the Moor Divock stone avenue is very similar to the Shap Avenue c7km to the south-west, as are the alignments of the avenues themselves, and it is possible that they may originally have been contiguous (Ferguson 1894). Later activity on the Fell includes High Street Roman road, and two Romano-British farmsteads (OA North 2002).

5.2 ARCHAEOLOGICAL REMAINS ALONG THE ROUTE OF THE BRIDLE WAY

5.2.1 In 1988, a comprehensive archaeological survey of Askham Fell was undertaken by OA North under their former guise as Lancaster University Archaeological Unit (LUAU) (Quartermaine and Leech forthcoming). A number of the features identified over the course of the survey fell within the area of the affected bridle way, and where they did, are listed below. In order both to avoid confusion with those sites already referred to in this document and so that the Askham Fell sites can be more easily cross-referenced with their original numbers (OA North 2002), these original numbers have been retained and are prefixed with 'AF' (Askham Fell).

Askham Fell Site Code	Site type
AF 1	Visible section of High Street Roman road, south-west of the Elder Beck. Straddled by the bridle way
AF 2 and AF 3	Sections of a bank running parallel to, and to the south-east, of section AF 1 of the Roman road, straddled by the bridle way
AF 4	Possible 'L'-shaped bank or wall, parallel and perpendicular to section AF 1 of the Roman road
AF 5	Section of High Street Roman road between the tributaries of the Elder Beck. Adjoins north/south section of the bridle way
AF 7-8	North/south aligned discontinuous sections of two parallel stone banks, transected by the bridle way
AF 9-10	North/south aligned sections of two parallel stone banks, adjoining the southern edge of the bridle way
AF 14	Possible roundhouse adjacent to the northern edge of the bridle way
AF 22-34	Collection of Bronze Age cairns between 50-150m to the south of the bridle way
AF 37	Section of north/south aligned bank adjacent to the southern edge of the bridle way
AF 86	Cockpit Neolithic stone circle, adjacent to the east side of the bridle way
AF 87-93	Collection of Bronze Age cairns within 50m of the eastern edge of the bridle way

Table 3: Summary of sites transected by, or adjacent to, the route of the Askham Fell Bridle Way (Fig 18)

5.2.2 In total, 32 known archaeological features are either adjacent to, traversed by, or within 100m of the affected area of bridle way (Fig 18). One of the most significant features is a 1180m long section of the High Street Roman road (AF 1 and 5), which lies parallel, but up to 80m to the north-west of the currently scheduled line of the road first marked on the 1st edition OS map (1867). Section AF 1 of the road, which is aligned north-east/south-west, is transected by the bridle way at NY 47910 22215. At the north-eastern end of the section (AF 5) the road appears to merge with the bridle way, which probably defines the continuing line of the Roman road. The surviving section of road is not entirely continuous and its form varies throughout its length. The best preserved section, between NY 4764 2219 and NY 4792 2224, comprises a

well defined, fairly regular, flat-topped *agger*. It has an irregular, discontinuous ditch only on the south-eastern (up-slope) side which cuts through the *agger* in two places to allow for drainage. The *agger* is on average about 4m wide and is up to 0.5m above the bottom of the ditch. By contrast, at the south-western end (between NY 4738 2176 and NY 4755 2192) the road comprises just two parallel ditches between 7m and 9.5m apart with no evidence of an *agger*. At NY 48174 22350 there is a possible crossing of the Elder Beck (Hay 1943) and, continuing on from the beck section, the road takes the form of a low bank with a slight ditch on the up-slope side.

- 5.2.3 Several banks, which were either orientated parallel to the road or terminate at the road, are clearly related to it; however, they may post-date its construction. Stone bank AF 2 is a 430m long, discontinuous and irregularly defined stone-bank which is orientated approximately parallel to the Roman road. It apparently merges into bank AF 3, but, because of the poor definition of AF 2 at this point, it is not possible to determine their phased relationship. Banks AF 3 and AF 4 are similar in form, they display large amounts of stone material, are of similar width and prominence and were probably component parts of a single feature. AF 4 displays evidence of kerbing and may have been a wall. Part of AF 4 overlies the Roman road and clearly post-dates its use as a thoroughfare.
- 5.2.4 Extending down-slope from the road are a series of parallel, discontinuous, irregular stone banks (AF 7-10). They are similar in form and were possibly a result of the erratic dumping of clearance stone along lines of field boundaries. Banks AF 8 and AF 10 butt against the Roman road and, therefore, post-date its construction. In between banks AF 7 and AF 8 there is an ill-defined, low, circular bank which has slight internal terracing (AF 14) and an entrance on its south-western side. It would appear to be a hut-circle, but it is too indistinct for a reliable interpretation.
- 5.2.5 Less than 50m to the south of the bridle way are two stone banks that are perpendicular to each other (AF 35 and AF 37), but separated by a localised, dense mire which obscures any possible join. Bank AF 37 is approximately parallel to banks AF 8 and AF 10 and is orientated towards the end of bank AF 3, hence may be related to a wider system of field boundaries. Stone bank AF 35 has a slight lynchet-like profile which may be indicative of soil slippage in the area to the north. Less than 100m to the south of the bridle way, there is a small cairnfield comprising small, generally ill-defined cairns (AF 22-34) which display no significant alignments and have an essentially random distribution.
- 5.2.6 At the point at which the bridle way turns north is a particularly important group of monuments, comprising the stone circle known as The Cockpit and some associated cairns in a well-drained, gently sloping area close to a natural ford crossing of the Elder Beck. The Cockpit stone circle is a scheduled ancient monument and the scheduled area includes part of the adjacent bridle way. The stone circle (AF 86) comprises an annular, stone bank with 27 large, standing (the tallest stone is about 0.95m high) and recumbent stones (the longest measures 1.9m) set for the most part into the internal face of the bank (31.5-32.8m average diameter). On the north side of the stone circle is an arc of four small cairns (AF 87-90) which have radii from the centre of the stone circle of

arc of four small cairns (AF 87-90) which have radii from the centre of the stone circle of between 35m and 51m.

5.3 DAMAGED SECTIONS OF THE BRIDLE WAY

Area	NGR	Archaeological feature affected	Within Scheduled area
A	NY 48300 22722		Yes
B	NY 48289 22606		Yes
C	NY 48261 22514	AF 5 - section of Roman road	Yes
D	NY 48248 22339		Yes
E	NY 48238 22240	AF 86 - visual impact on The Cockpit prehistoric stone circle and associated standing stones, where areas of damaged bridle way lie within 25m of the monument	Yes
F	NY 48223 22231		Yes
G	NY 48206 22232		Yes
H	NY 48085 22241		
I	NY 47996 22222		
J	NY 47976 22226		
K	NY 47944 22220	AF 3 - bank parallel to Roman road AF 1	
L	NY 47920 22217	AF 1 - section of Roman road	
M	NY 47809 22206		
N	NY 47762 22178		
O	NY 47419 22047		
P	NY 47330 22003		
Q	NY 47276 21926		

Table 4: Summary of damaged areas along the route of the Askham Fell Bridle way

5.3.1 During the course of the damage appraisal undertaken in March 2005, 17 areas of damage to the bridle way were recorded, and are tabulated, along with their NGR, in Table 4. Much of the damage that was recorded was in the form of deep wheel ruts and also expansion of the margins of the bridle way, again by wheel ruts (Plates 9-11). Although not all areas of damage corresponded to the positions of archaeological features, there were several areas where archaeological features and damaged areas either came very close, or actually coincided. Damage area C, located at a ford across a tributary of the Elder Beck, was of significance, as it is in this area that the clearly visible *agger* of the Roman Road peters out. Parts of this section of the bridle way are within the scheduled areas of The Cockpit stone circle and High Street Roman road (Table 4). A comprehension of the nature of the Roman road in that area is important in not only developing an understanding of the manner in which the

arc of four small cairns (AF 87-90) which have radii from the centre of the stone circle of between 35m and 51m.

5.3 DAMAGED SECTIONS OF THE BRIDLE WAY

Area	NGR	Archaeological feature affected	Within Scheduled area
A	NY 48300 22722		Yes
B	NY 48289 22606		Yes
C	NY 48261 22514	AF 5 - section of Roman road	Yes
D	NY 48248 22339		Yes
E	NY 48238 22240	AF 86 - visual impact on The Cockpit prehistoric stone circle and associated standing stones, where areas of damaged bridle way lie within 25m of the monument	Yes
F	NY 48223 22231		Yes
G	NY 48206 22232		Yes
H	NY 48085 22241		
I	NY 47996 22222		
J	NY 47976 22226		
K	NY 47944 22220	AF 3 - bank parallel to Roman road AF 1	
L	NY 47920 22217	AF 1 - section of Roman road	
M	NY 47809 22206		
N	NY 47762 22178		
O	NY 47419 22047		
P	NY 47330 22003		
Q	NY 47276 21926		

Table 4: Summary of damaged areas along the route of the Askham Fell Bridle way

5.3.1 During the course of the damage appraisal undertaken in March 2005, 17 areas of damage to the bridle way were recorded, and are tabulated, along with their NGR, in Table 4. Much of the damage that was recorded was in the form of deep wheel ruts and also expansion of the margins of the bridle way, again by wheel ruts (Plates 9-11). Although not all areas of damage corresponded to the positions of archaeological features, there were several areas where archaeological features and damaged areas either came very close, or actually coincided. Damage area C, located at a ford across a tributary of the Elder Beck, was of significance, as it is in this area that the clearly visible *agger* of the Roman Road peters out. Parts of this section of the bridle way are within the scheduled areas of The Cockpit stone circle and High Street Roman road (Table 4). A comprehension of the nature of the Roman road in that area is important in not only developing an understanding of the manner in which the

road traverses the ford, but also the nature of the road beyond the visible *agger* as it converges with the scheduled area denoting the interpolated route of the Roman road. Damaged areas E, F and G were very close to the position of The Cockpit stone circle (AF 86) and, although they did not directly affect either the monument itself or any of the associated standing stones, the visual integrity of the monument has definitely been compromised. Damage areas A-G are within the extent of the stone circle and Roman road scheduled area.

- 5.3.2 Area K was a significant area of damage, as it coincided with the point where bank AF 3, possibly associated with the Roman road, is crossed by the route of the bridle way. Similarly, damage area L was very close to where the Roman road itself (AF 1) was crossed by the bridle way. Other features, including banks AF 7, AF 8, AF 9 and roundhouse AF 14, despite being straddled by, or lying very close to, the bridle way, have not been recorded as being negatively affected.
- 5.3.3 Although the damage to archaeological features has fortunately been limited to only a few localised areas, the most serious of which is probably that in the area where High Street Roman road (AF 5) joins the north/south running section of the bridle way. However, the extent and nature of the damage to the bridle way has highlighted the fragility of the local soil conditions. While the unsuitability of a bridle way for heavy vehicles may seem self-explanatory, provision of signs discouraging vehicular traffic, may be of use in preventing further mishaps.

6. DISCUSSION

6.1 DISCUSSION

- 6.1.1 The route of the Pooley Bridge to Shap section of the Hayeswater pipeline has been the subject of a comprehensive, integrated and flexible programme of archaeological work. The various elements of this programme, including desk-based study and walkover survey (reported elsewhere - OA North 2004), topographic survey, field evaluation and watching brief, has meant that archaeological features within the study area have been identified and recorded as fully as possible and, as a result, no mitigative action is outstanding.
- 6.1.2 In total, 100 evaluation trenches were excavated, although only three, Trenches 32, 34 and 46, revealed archaeological remains. Despite the fact that the evaluation took place in areas of unploughed, unimproved pasture, which might be considered to be of high archaeological potential, the very low density of archaeological remains would appear in part to be a genuine reflection of low land-use intensity. In tandem with the comprehensive walkover surveys and desk-based assessments, the multiple revisions to the route, in an attempt to avoid archaeologically sensitive areas, appear to have been a success and have been a major influence on limiting the amount of archaeology encountered; indeed, two of the three trenches that revealed archaeology were within the only designated hazard area (Helton) to be crossed by the route of the pipeline. The two other areas of (limited) archaeological potential comprised Setterah Park and the Roman road near Celleron. The fact that the extensive watching brief produced little further information would suggest that the evaluated sample was representative of the nature of the archaeology in the area.
- 6.1.3 On the whole, the trenches that were targeted upon specific sites of archaeological potential failed to uncover any significant remains, with the exception of those within the Helton Hazard Area (Trenches 28-38). In the case of the Roman road, near Celleron, it is possible that the probable route is under the modern-day trackway; however, the watching brief has shown that the trackway was constructed of compacted stones, relating to modern metalling, overlying natural subsoils, and that there was no clear indication of an earlier road underlying the extant road. The siting of the evaluation trenches would have meant that if the Roman road had followed another, parallel, but nearby route, then it would probably have been identified. For the other targeted areas, it may well be that no archaeology was encountered because there is genuinely no archaeology there; however, it must be remembered that this was only an evaluation, examining a relatively small percentage of the area available.
- 6.1.4 The features revealed were somewhat difficult to interpret fully, not least because of the lack of stratified dating evidence; the putative bank uncovered in Trench 32 (Plate 1), to the east of Helton, appeared to represent Site 127 noted in the previous Archaeological Appraisal and Walk-Over Survey Report (OA North 2003), but was not confirmed to be anthropogenic in

nature. The topographic survey (*Section 3.1.3*) indicates that this feature follows the aratral shape of the local land divisions, which have clearly been influenced by the medieval aratral ridge and furrow. It can be seen that the bank (Site 127 - Fig 5) divides the modern plot into two roughly equal areas of land, very similar in width of the plot to the south, which is likely to retain the original, medieval toft width of c20m. As such, bank 127 is likely to be a medieval toft boundary that was formalised after the initial laying out of the tofts and after the area had been ploughed (otherwise a more regular plan might be expected). The origin of the aratral shape of the local field boundaries is clearly indicated by the presence of Site 118, an area of ridge and furrow, which was surveyed to the north (*Section 3.1.4*).

- 6.1.5 The two cobbled surfaces (Plates 2-3) within Trench 34, to the east of Helton, and a linear feature in Trench 46 (Plate 4), on the Helton to Bampton road, north-east of Heltondale Beck, remained undated. However, one of these cobbled surfaces (2) in Trench 34 (Plate 2), was clearly seen to seal the earlier one (4) (Plate 3), presumably showing some continuity of use on site, although whether this was as a yard, a track or the floor surface of a structure such as a barn, is uncertain. Unfortunately, the stripping of the pipeline easement in the areas of the features identified in the evaluation was undertaken without archaeological supervision; therefore, by the time that the watching brief had commenced, these features had already been destroyed.
- 6.1.6 The location of the cobbled surfaces, some way outside of the south-eastern edge of modern Helton, is perhaps of interest. As such, these surfaces might have been associated with older village tofts and crofts now existing only as earthworks. If this is the case, then it is possible that the cobbled surfaces were laid before the size of the village shrunk in extent, which probably occurred in the fourteenth century as a result of murrains, plague and border hostility (Taylor 1983, 151). Although the dating evidence from the topsoil from above the features is inconsistent with such a date, the relative rarity of pottery in the area during the middle ages may mean that contemporary pottery would be under-represented. Indeed, the absence of stratified pottery from either of the cobbled surfaces might suggest that they were laid down when pottery was less common and therefore much earlier than the abundant and later pottery from the topsoil in Trench 34 would suggest. In such a scenario, this later pottery is likely to relate to night soiling of the infields close to the village at a later date. An alternative explanation may be that the cobbled surfaces could relate to a farm, no longer extant, that continued in use up to the eighteenth or nineteenth century as the pottery suggests.
- 6.1.7 The pile of stones seen in Area A of the watching brief was interpreted as a possible clearance cairn, but had been disturbed before any archaeological observation was implemented on the site and, therefore, the identification must remain tentative.
- 6.1.8 Although positive evidence for activity was frequently lacking, it is possible to suggest one or two instances of probable negative evidence. It has been suggested that the Shap and Moor Divock stone avenue alignments may have been contiguous (OA North 2003). The intense placement of trenches to the north-west of the Shap Stone Alignment Hazard Area (Trenches 74-87) and to the south-west of Setterah park (Trenches 39-51) found no evidence for

prehistoric features, which may be an indication that there was no northerly continuation of the Shap Avenue. Similarly, the lack of archaeological features to the north-east of the Shap Abbey Hazard Area would support the interpretation of earthworks 117 and 118 as curtilage boundaries, which has inhibited the development of the monastic complex in this direction.

7. BIBLIOGRAPHY

7.1 PRIMARY AND CARTOGRAPHIC SOURCES

Ordnance Survey (OS) 1867 6" to 1 mile 1st edition map

Ordnance Survey (OS) 1983 *Soil Survey of England and Wales: Sheet 1 Soils of Northern England*, Southampton

7.2 SECONDARY SOURCES

Association of County Archaeological Officers (ACAO) 1993 *Model briefs and specifications for Archaeological Assessments and Field Evaluations*, Bedford

Burl, A, 1993 *From Carnac to Callanish; the prehistoric stone rows and avenues of Britain, Ireland and Brittany*, Newhaven and London

Butler, L, and Given-Wilson, C, 1979, *Medieval monasteries of Great Britain*, **2**, London

Butlin, RA, 1993 *Historical Geography: through the gates of time and space*, London

Cherry, PJ and Cherry, J, 2002 Coastline and Upland in Cumbrian Prehistory - A Retrospective, *Trans Cumberland Westmorland Antiq Arch Soc*, 3rd ser, **2**, 1-20.

Clare, T, 1978 Recent Work on Shap Avenue, *Trans Cumberland Westmorland Antiq Archaeol Soc n ser*, **78**, 5-15

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

Cumbria County Council Archaeology Service (CCCAS), nd *The Archaeology of Eden Villages*, unpubl rep held by SMR

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

Ferguson, RS, 1894 *A History of Westmorland*, London

Hall, G, 1824 Carl Loft's at Shap, Westmorland, *Gentleman's Magazine*, **94** part 1, 3

Hay, T, 1943 The ford over Elder Beck, *Trans Cumberland Westmorland Antiq Archaeol Soc*, **43**, 25-7

Institute of Field Archaeologists (IFA), 1992 *Guidelines for data collection and compilation*

Lasdun, S, 1991 *The English Park, Royal, Private and Public*, London

LUAU, 1997b *North West Water Haweswater Estate, Cumbria: Archaeological Survey*, unpubl rep

LUAU, 2000 *Rosgill Moor to Shap Water Main Renewal Scheme, Cumbria*, unpubl rep

Lukis, Rev, WC, 1894 Shap Avenue, Westmorland, *Proc Soc Antiq London*, **10**, 313-320

Margary, I, 1973 *Roman Roads in Britain*, 3rd Edition, London

- Mills, AD, 1998 *Dictionary of English Place-Names*, 2nd Edition, Oxford
- Marshall, JD, and Davies-Shiel, M, 1977 *The Industrial Archaeology of the Lake Counties*, Beckermest
- Nicholson, J, and Burn, R, 1777 *The History and Antiquities of the Counties of Westmorland and Cumberland*, 2 vols, London
- OA North 2002a *Survey Levels*, unpubl rep
- OA North 2002b *Askham Fell, Haweswater Pipeline, Cumbria: Rapid Archaeological Assessment*, unpubl rep
- OA North 2003 *Hayeswater Pipeline, Cumbria: Rapid Archaeological Appraisal and Walk-Over Survey Report, Fourth Revision: Bankwood to Raisbeck and Shap to Pooley Bridge sections*, unpubl rep
- OA North 2004 *Hayeswater Pipeline - Bankwood to Raisbeck, Cumbria: Archaeological Evaluation and Survey Report*, unpubl rep
- Quartermaine, J, and Leech, R, forthcoming *The later prehistory of the Lake District, the results of upland surveys*
- Roberts, BK, 1993 Five Westmorland Settlements: A Comparative Study, *Trans Cumberland Westmorland Antiq Archaeol Soc, n ser*, **93**, 131-143
- Taylor, C, 1983 *Village and farmstead*, London
- Waterhouse, J, 1985 *The stone circles of Cumbria*, Chichester
- Winchester, AJL, 1987 *Landscape and Society in Medieval Cumbria*, Edinburgh

APPENDIX 1: PROJECT DESIGN

**Oxford
Archaeology
North**

March 2004

HAYESWATER PIPELINE BETWEEN POOLEY BRIDGE AND SHAP

CUMBRIA

EVALUATION

Proposals

The following project design is offered in response to a request from Barbara Cardie, United Utilities, for an evaluation of the proposed route for a pipeline between Pooley Bridge and Shap, Cumbria.

1. INTRODUCTION

1.1 CONTRACT BACKGROUND

1.1.1 Oxford Archaeology North has been invited by United Utilities and MWH, to submit a project design and costs for an evaluation on the line of a proposed Hayeswater pipeline between Pooley Bridge and Shap (OA North 2003). This follows on from an earlier appraisal and walk-over survey which made recommendations for the evaluation of selected sites.

1.1.2 Some sections of the route will follow the line of the road, and will entail no more than a cut through the road surface. In these cases there is no need for a wide top-soil stripped easement corridor and consequently will have a much reduced impact on any archaeology than routes extending across open fields. These sections will therefore not need to be subject to evaluation. The evaluation will be targeted on those sites of the route which will be directly affected by the proposed pipeline.

1.2 OXFORD ARCHAEOLOGY NORTH

1.2.1 Oxford Archaeology North (OA North) has considerable experience of the archaeological survey and evaluation of sites and monuments of all periods, having undertaken a great number of small and large projects during the past 20 years. Projects have been undertaken to fulfil the different requirements of various clients and planning authorities, and to very rigorous timetables. OA North has considerable experience of the recording of historic buildings together with the evaluation and excavation of sites of all periods, having undertaken a great number of small and large scale projects during the past 20 years. Fieldwork has taken place within the planning process and construction programmes, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.

1.2.2 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an Institute of Field Archaeologists (IFA) registered organisation, registration number 17, and all its members of staff operate subject to the IFA Code of Conduct.

2. OBJECTIVES

2.1 The following programme has been designed, in accordance with a verbal brief by Lake District National Park Authority (LDNPA) to provide an evaluation and topographic of selected sites in advance of the laying of the proposed pipeline. The required stages to achieve these ends are as follows:

2.2 EVALUATION TRENCHING

2.2.1 To implement a programme of trial trenching examining 5% of a 20m wide corridor centred on the location of selected sites. To provide an investigation of the background areas where archaeological sites have not yet been investigated.

2.3 TOPOGRAPHIC SURVEY

2.3.1 To implement a programme of mitigative topographic survey of a series of earthwork sites.

2.3 REPORT

2.3.1 A written report will assess the significance of the data generated by this programme within a local and regional context. It will present the evaluation and would make an assessment of the archaeological potential of the area, and would make recommendations for further work.

3. METHOD STATEMENT

3.1 EVALUATION TRENCHING

3.1.1 **Methods:** the programme of trenching will establish the presence or absence of any previously unsuspected archaeological deposits and, if established, will then test their date,

nature, depth and quality of preservation. The evaluation will be undertaken within a 20m wide easement corridor which will be of varying length subject to the size and character of the site to be examined. The evaluation will examine 5% of each evaluation areas and it is proposed to excavate 20m x 2m trenches which will be excavated in accordance with the recommendation of the appraisal report and defined below:

Shap to Pooley Bridge

Site No	Site Type	NGR	Corridor Length For evaluation	Area of evaluation	No of Trenches
29	Shap Stone	NY 550 160			
35	Roman Road	NY 4955 2497	120	2400m ²	4
45	Askham Medieval Village	NY 5070 2340	600	11000 m ²	12
46	Helton Medieval Village	NY 510 220	800	21020 m ²	15
71	Trackway	NY 5406 1700	145	2900 m ²	4
73	Field System	NY 535 181	200	4000 m ²	5
89	Abbey Curtillage	NY 5498 1552	250	5000 m ²	6
91	Stone	NY54889 15894	600	12000 m ²	16
113	Park	NY 5122 2095	1300	26000 m ²	14

- 3.1.2 In total this will entail the excavation of 76 trenches. The layout of the trenches will be configured with predominant trenches along the line of the corridor in conjunction with a series of trenches across the line of the pipeline. The arrangement will be adjusted so as to target surface features of particular significance.
- 3.1.3 In addition it is proposed to examine those areas where archaeological features have yet to be discovered, in between the areas of more intensive evaluation. Excluding those sections of pipeline which have previously been examined, this comprises an overall length of 11,000m of pipeline. It is proposed to examine 10% of this length and would entail the excavation of 50 20m x 2m trenches. These would be uniformly scattered along the line, but targeting any sites or surface features of archaeological potential as identified by the walk-over surveys and the proposed topographic surveys would be further targeted by the evaluation trenches. The layout of the 50 trenches is provisionally shown within the attached plan, but this is subject to change following the surveys and in discussions with the LDNPA.
- 3.1.4 The trenches will be excavated by a combination of mechanised and manual techniques; the topsoil will be removed by mechanical excavator, fitted with a 1.7m wide toothless bucket, and archaeological deposits beneath will be first manually cleaned and then any features identified will be manually excavated. The machine excavation will not intrude into any potential archaeological stratigraphy and all machine excavation will be undertaken under careful archaeological supervision. Following mechanical excavation the floor of the trench will be cleaned by hoe and Manual excavation techniques will be used to evaluate any sensitive deposits, and will enable an assessment of the nature, date, survival and depth of deposits and features. The trenches will not be excavated deeper than 1.25m to accommodate health and safety constraints; any requirements to excavate below this depth will involve recosting.
- 3.1.5 The trench will be excavated in a stratigraphical manner, whether by machine or by hand. The trench will be located by use of GPS equipment which is accurate to +/- 0.25m, altitude information will be established with respect to Ordnance Survey Datum. Archaeological features within the trenches will be planned by manual techniques.
- 3.1.6 **Environmental Sampling:** environmental samples (bulk samples of 30 litres volume, to be sub-sampled at a later stage) will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches). Subject to the results of the excavation an assessment of any environmental samples will be undertaken by the in-house

palaeoecological specialist, who will examine the potential for further analysis. The assessment would examine the potential for macrofossil, arthropod, palynological and general biological analysis. The costs for the palaeoecological assessment are defined as a contingency and will only be called into effect if good waterlogged deposits are identified and will be subject to the agreement of LDNPA and the client.

- 3.1.7 Samples will also be collected for technological, pedological and chronological analysis as appropriate. If necessary, access to conservation advice and facilities can be made available. OA North maintains close relationships with Ancient Monuments Laboratory staff at the Universities of Durham and York and, in addition, employs artefact and palaeozoological specialists with considerable expertise in the investigation, excavation and finds management of sites of all periods and types, who are readily available for consultation.
- 3.1.8 **Recording:** all information identified in the course of the site works will be recorded stratigraphically, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.
- 3.1.9 Results of the field investigation will be recorded using a paper system, adapted from that used by Centre for Archaeology of English Heritage. The archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20, and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.

3.2 TOPOGRAPHIC SURVEY

- 3.2.1 **Instrument Survey:** it is proposed to undertake a level 2b survey (see OA North survey levels, *Appendix 1*) of the sites identified by the appraisal, which is equivalent to RCHM(E) level 2. All appropriate topographic detail will be recorded to provide an appropriate context for the archaeological detail. Depending on the character of the site, the survey will either be recorded using a total station or a differential GPS.

3.2.2 *Sites for Survey*

Sites 45, 133 - Askham Medieval Village
Site 46, 127-8 - Helton Medieval Village
Site 71 - Trackway
Site 73 - Earthworks
Site 115 - Trackway
Site 116 - Earthwork
Site 117 - Earthwork
Site 118 - Earthwork
Site 125 - Earthwork
Site 138 - Earthwork
Site 139 - Earthwork

- 3.2.3 **GPS Survey:** in lower order sites detail survey will be undertaken using a post-processed differential GPS, which is accurate to 150mm. The data will then be plotted up and will be subject to manual enhancement.
- 3.2.4 **Total Station Survey:** survey control will be established over the site by closed traverse and internally will be accurate to +/- 15mm; the control network will be located onto the Ordnance Survey National Grid by the use of Global Positioning Survey (GPS), which will locate to an accuracy of +/- 0.5m.
- 3.2.5 The surface features will be surveyed by EDM tacheometry using a total station linked to a data logger, the accuracy of detail generation being appropriate for a 1:500 output. The digital data will be transferred onto a portable computer for manipulation and later transfer to other digital or hard mediums. Film plots will be output via a plotter. The archaeological detail will be drawn up in the field as a dimensioned drawing on the plots with respect to survey markers. Most topographic detail will also be surveyed, particularly if it is archaeologically significant or is in the vicinity of archaeological features. The survey

drawings will be generated within a CAD system and will be merged with existing topographic data, and will also be merged with the results from the earlier survey. The results can be output at any scale.

3.2.6 **Site Gazetteer:** the survey would be accompanied by a gazetteer description of individual archaeological features, which will relate directly to the survey mapping.

3.2.7 **Photographic Survey:** in conjunction with the archaeological survey a photographic archive will be generated, which will record significant features and general landscapes. It will be undertaken in 35mm black and white and colour slide film. For the following sites it is proposed only to undertake a photographic survey, and will omit any instrument recording beyond that necessary to locate the features.

3.3 REPORT

3.3.1 **Archive:** the results of the fieldwork will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*The Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork, which will be catalogued by context. This archive can be provided in the English Heritage Centre for Archaeology format and a synthesis will be included in the Cumbria Sites and Monuments Record. A copy of the archive can also be made available for deposition with the National Archaeological Record. OA North practice is to deposit the original record archive of projects (paper, magnetic and plastic media) with the appropriate County Record Office, and a full copy of the record archive (microform or microfiche) together with the material archive (artefacts, ecofacts, and samples) with an appropriate museum.

3.3.2 **Report:** one bound and one unbound copy of a written synthetic report will be submitted to the Client, and a further two copies will be submitted to the Lake District National Park Authority SMR. The report will include a copy of this project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and present an assessment of the sites history; the report will include photographs of any significant features. The report will also include a complete bibliography of sources from which data has been derived, and a list of further sources identified during the programme of work, but not examined in detail. The report will include a description of the methodology and the results. A list of the finds, and a description of the collective assemblage. Details of any environmental work undertaken.

3.3.3 The report will include a frontispiece showing the planning number and the grid reference. It will have a summary and a methodological statement, and it will define any variations to the defined programme. It will include recommendations for further work.

3.3.4 Illustrative material will include a location map, site map, a trench location map, trench plans, and also pertinent photographs. It can be tailored to the specific requests of the client (eg particular scales etc), subject to discussion.

3.3.5 **Publication:** a summary report of the results will be submitted to a regional journal, and information from the project will be fed into the OASIS project (On-line Access to Index of Archaeological Investigation).

3.4 OTHER MATTERS

3.4.1 **Health and Safety:** OA North conforms to all health and safety guidelines as contained in the Lancaster University Manual of Health and Safety and the safety manual compiled by the Standing Conference of Archaeological Unit Managers. The work will be in accordance with Health and Safety at Work Act (1974), the Council for British Archaeology Handbook No. 6, *Safety in Archaeological Fieldwork* (1989).

3.4.2 Full regard will, of course, be given to all constraints (services etc) during the watching brief and fabric survey, as well as to all Health and Safety considerations. OA North provides a

Health and Safety Statement for all projects and maintains a Unit Safety policy. A risk assessment will be completed in advance of the project's commencement. If there is a requirement to excavate trenches deeper than 1.25m the trenches will be stepped out to minimise section collapse. As a matter of course the Unit uses a U-Scan device prior to any excavation to test for services. It is assumed that the client will provide any available information regarding services within the study area, if available.

- 3.4.3 **Insurance:** the insurance in respect of claims for personal injury to or the death of any person under a contract of service with the unit and arising out of an in the course of such person's employment shall comply with the employers' liability (Compulsory Insurance) Act 1969 and any statutory orders made there under. For all other claims to cover the liability of OA North, in respect of personal injury or damage to property by negligence of OA North or any of its employees, there applies the insurance cover of £2m for any one occurrence or series of occurrences arising out of one event.
- 3.4.4 **Confidentiality:** the report is designed as a document for the specific use of the Client, for the particular purpose as defined in the project design, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose can be fulfilled, but will require separate discussion and funding.
- 3.4.5 **Project Monitoring:** OA North will consult with the client regarding access to the site. Whilst the work is undertaken for the client, the County Archaeologist will be kept fully informed of the work and its results. Any proposed changes to the project design will be agreed with LDNPA in consultation with the Client.
- 3.4.6 **Contingency:** costs are defined for the provision of a palaeoenvironmental assessment, and faunal remains analysis. The palaeoenvironmental analysis would be subject to an assessment by the OA North palaeoenvironmental specialist (E Huckerby), the faunal remains would be subject to an assessment by the OA North animal bone specialist (A Bates).

4. WORK PROGRAMME

- 4.1 The following programme is proposed:

Evaluation Trenching

31 days will be required to complete this element

Topographic Survey

7 days will be required to complete this element

Report

A 15 day period would be to complete this element

- 4.2 OA North can execute projects at short notice once an agreement has been signed with the client.
- 4.3 The project will be managed by **Jamie Quartermaine BA Surv Dip MIFA** (Unit Project Manager) to whom all correspondence should be addressed. OA North adheres by the IFA's Code of Conduct and the Code of Approved Practice for the regulation of Contractual Arrangements in Field Archaeology.

APPENDIX 2: TRENCH DESCRIPTIONS

Trench Number 1
Location Celleron Road
Alignment East/west
Figure Number 6
Maximum Depth 1.1m
Description This trench revealed widespread evidence of the build up of hill wash material, which directly overlay the natural boulder clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 2
Location Celleron Road
Alignment North/south
Figure Number 6
Maximum Depth 1.2m
Description This trench also revealed evidence for a deep deposit of hillwash material, and with the trench terminated at a depth of 1.2m, due to health and safety constraints, the underlying natural geology remained uncovered. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 3
Location Celleron Road
Alignment North/south
Figure Number 6
Maximum Depth 0.75m
Description The topsoil within this trench had a maximum depth of 0.25m and overlay the light greyish-brown sandy silt subsoil. This subsoil had a maximum depth of 0.5m, and directly overlay the natural geology, which consisted of a pale orange boulder clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 4
Location Celleron Road
Alignment East/west
Figure Number 6
Maximum Depth 0.5m
Description The topsoil in this trench was very thin, with a maximum depth of 0.2m, and it directly overlay the light orange boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 5
Location Celleron Road
Alignment East/west
Figure Number 6
Maximum Depth 0.6m
Description Within this trench the topsoil proved to have a maximum depth of 0.3m and directly overlay the reddish-grey boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 6
Location Celleron Road
Alignment North-west/south-east

Figure Number 6
Maximum Depth 1.2m
Description The topsoil, within this trench had a maximum depth of 0.3m and overlay the mid-yellowish-brown silty sand subsoil, of maximum depth 0.9m. The subsoil overlay the light yellowish-brown clayey sand natural geology which sloped down towards the north-western end of the trench. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 7
Location Celleron
Alignment North-north-west/south-south-east
Figure Number 6
Maximum Depth 0.65m
Description This trench revealed topsoil of maximum depth 0.3m overlying a light to mid-greyish-brown silty sand subsoil of maximum depth 0.35m. This subsoil overlay the mid-orangish-brown boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 8
Location Celleron
Alignment North-north-west/south-south-east
Figure Number 6
Maximum Depth 0.5m
Description The topsoil within this trench had a maximum depth of 0.4m and directly overlay the light greyish-yellow clayey sand natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 9
Location Celleron
Alignment North-north-west/south-south-east
Figure Number 6
Maximum Depth 0.45m
Description This trench revealed only topsoil, which had a maximum depth of 0.35m, directly overlying the light reddish-brown boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 10
Location Celleron
Alignment North-west/south-east
Figure Number 6
Maximum Depth 0.7m
Description The topsoil in this had a maximum depth of 0.3m and overlay a 0.4m thick layer of light to mid-grey clayey-silt subsoil. This subsoil in turn overlay the light greyish-brown boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 11
Location Celleron to Askham Road
Alignment West-north-west/east-south-east
Figure Number 6
Maximum Depth 0.5m
Description This trench revealed topsoil to a maximum depth of 0.3m, directly overlying the mid-greyish-orange boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 12
Location Celleron to Askham Road
Alignment North-west/south-east
Figure Number 7
Maximum Depth 0.6m
Description The topsoil revealed in this trench was 0.3m deep and overlay the mid-greyish-brown clayey sand subsoil, which had a maximum depth of 0.3m. The subsoil directly overlay the mid-orange clayey sand natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 13
Location Celleron to Askham Road
Alignment North-north-west/south-south-east
Figure Number 7
Maximum Depth 0.45m
Description This trench revealed only the topsoil which was 0.3m deep, directly overlying the mid-pinkish-brown boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 14
Location East of Limekiln Plantation
Alignment North-north-west/south-south-east
Figure Number 7
Maximum Depth 0.65m
Description This trench revealed topsoil to a maximum depth of 0.25m, overlying a 0.4m thick layer of mid- to dark orangish-brown sandy clay subsoil. The subsoil lay directly on top of the fissured natural limestone bedrock. A disused field boundary was observed, aligned broadly east/west, consisting of frequent small to medium sub-rounded to rounded stones set in a matrix of light yellowish sandy clay.

Trench Number 15
Location West of Askham
Alignment North-north-west/south-south-east
Figure Number 7
Maximum Depth 0.25m
Description The topsoil in this trench had a maximum depth of 0.25m and directly overlay the natural limestone bedrock, which was relatively flat. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 16
Location West of Askham
Alignment North-north-west/south-south-east
Figure Number 7
Maximum Depth 0.45m
Description This trench revealed topsoil to a maximum depth of 0.25m overlying a 0.2m thick layer of mid- to dark brownish-orange sandy clay subsoil. This subsoil directly overlay the natural geology, consisting of broken limestone bedrock and patches of sterile clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 17
Location West of Askham

Alignment North-north-west/south-south-east
Figure Number 7
Maximum Depth 0.6m
Description Topsoil to a depth of 0.3m, overlay a 0.3m thick mid- to dark orange sandy clay subsoil within this trench. The subsoil in turn sealed the underlying natural geology, comprising broken limestone bedrock and patches of sterile clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 18
Location West of Askham
Alignment North-west/south-east
Figure Number 7
Maximum Depth 0.34m
Description This trench revealed topsoil to a maximum depth of 0.34m, which directly overlay the light orangish-grey sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 19
Location West of Askham
Alignment North-west/south-east
Figure Number 7
Maximum Depth 0.3m
Description The topsoil in this trench had a maximum depth of 0.2m and sealed a 0.1m thick layer of light to mid-grey clayey-silt subsoil. The subsoil overlay the light yellowish-grey boulder clay natural, which contained a number of patches of gravel, particularly at the north-western end of the trench. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 20
Location West of Askham
Alignment North-east/south-west
Figure Number 7
Maximum Depth 0.3m
Description This trench revealed topsoil to a maximum depth of 0.3m, directly overlying the light orangish-grey clayey sand natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 21
Location West of Askham
Alignment North-west/south-east
Figure Number 7
Maximum Depth 0.5m
Description The topsoil within this trench had a maximum depth of 0.25m and sealed the 0.25m thick mid-grey clayey-silt subsoil. The subsoil overlay a mid- to light grey clayey sand natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 22
Location West of Askham
Alignment North-west/south-east
Figure Number 7
Maximum Depth 0.5m

Description A 0.2m thick layer of topsoil overlay the 0.15m thick mid-yellowish-grey clayey sand subsoil, which in turned sealed the mid-yellowish-grey boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 23
Location West of Askham
Alignment North-east/south-west
Figure Number 7
Maximum Depth 1m
Description The topsoil within this trench had a maximum depth of 0.3m and directly overlay up to 0.7m of light orangish-brown sandy clay hillwash material. The hillwash sealed the underlying natural geology which consisted of mid-to dark reddish-orange boulder clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 24
Location West of Askham
Alignment North-west/south-east
Figure Number 7
Maximum Depth 0.5m
Description This trench revealed topsoil to a maximum depth of 0.2m, overlying a 0.3m thick layer of mid-orangish-brown clayey sand subsoil. This subsoil overlay a mid-orange boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 25
Location South of Askham
Alignment North-north-west/south-south-east
Figure Number 7
Maximum Depth 1.2m
Description Within this the trench, the topsoil had a maximum depth of 0.25m and directly overlay the 0.95m thick light greyish-brown clayey sand subsoil, probably representing material washed down the hillside. The subsoil in turn overlay the natural geology which was seen only at the south-eastern end of the trench, due to health and safety constraints. The natural geology within this trench consisted of an orange boulder clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 26
Location North of Helton
Alignment North-north-west/south-south-east
Figure Number 8
Maximum Depth 1m
Description The topsoil in this trench was shown to have a maximum depth of 0.25m, and directly overlay a layer of mid-brown sandy clay which had a maximum depth of 0.75m. The subsoil overlay a mid-orangish-grey sandy clay, representing the underlying natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 27
Location North of Helton
Alignment North/south
Figure Number 8

Maximum Depth 0.3m
Description This trench revealed the topsoil to a maximum depth of 0.3m, directly overlying the natural geology, a mid-orangish-grey clayey sand. A single feature, a stone-filled land drain, was exposed, aligned broadly north-east/south-west.

Trench Number 28
Location Helton
Alignment North-east/south-west
Figure Number 8
Maximum Depth 0.37m
Description Within this trench the topsoil had a maximum depth of 0.35m and directly overlay the mid-greyish-orange boulder clay natural geology. Areas of the underlying limestone bedrock were also exposed in the middle of the trench. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 29
Location Helton
Alignment North-north-east/south-south-west
Figure Number 8
Maximum Depth 0.55m
Description This trench revealed topsoil to a maximum depth of 0.3m, directly overlying the natural geology consisting of light to mid-orangish-brown boulder clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 30
Location Helton
Alignment North/south
Figure Number 8
Maximum Depth 1.2m
Description The topsoil, *I*, in this trench had a maximum depth of 0.4m and sealed a 0.9m thick layer of mid-greyish-brown silty clay subsoil. This subsoil, which could well represent hillwash material, sealed the natural geology consisting of mid-orange boulder clay, which sloped down towards the south. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 31
Location Helton
Alignment North/south
Figure Number 8
Maximum Depth 0.55m
Description A maximum of 0.35m of topsoil directly overlay the light yellowish-brown boulder clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 32
Location Helton
Alignment North/South
Figure Number 8
Maximum Depth 0.65m

Description The topsoil within this trench had a maximum depth of 0.45m and it sealed the underlying natural geology, which consisted of a mid-orangish-brown boulder clay at both the southern and northern ends of the trench. In the middle section of the trench, a modern concrete drain was observed running east/west, and a number of large sub-rounded boulders were also exposed. There was no obvious structure to these boulders, although they were in the correct position to form part of a large bank identified by previous work (OA North 2003, Gazetteer Site 127), and clearly seen running east/west across the field.

Trench Number 33
Location Helton
Alignment North/south
Figure Number 8
Maximum Depth 0.55m
Description This trench revealed topsoil to a maximum depth of 0.3m, directly overlying the natural geology consisting of a mixture of clay, coarse sand and fine gravel. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 34
Location Helton
Alignment North-north-east/south-south-west
Figure Number 8
Maximum Depth 0.5m
Description The topsoil within this trench had a maximum depth of 0.15m and overlay the underlying natural geology which was only exposed in a small patch, a modern sewer and two cobbled surfaces (2 and 4). The later cobbled surface (2) was located at the southern end of the trench and was exposed for a length of 2.45m, and was seen extending under the southern limit of excavation. It consisted of medium well-rounded stones, set into a matrix of sandy clay. A sondage was excavated through the surface but no finds were recovered from it. This surface overlay the earlier cobbled surface, 4, which extended for the length of the trench, although it was truncated by the modern sewer trench, and was far more crudely constructed than later surface 2.

Trench Number 35
Location Helton
Alignment West-north-west/east-south-east
Figure Number 8
Maximum Depth 0.6m
Description The topsoil, revealed within this trench had a maximum thickness of 0.3m and overlay a 0.3m thick layer of light to mid-brown sandy clay subsoil. The subsoil directly overlay the mid-brownish-orange boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 36
Location Helton
Alignment North-east/south-west
Figure Number 8
Maximum Depth 0.61m
Description The topsoil, in this trench had a maximum thickness of 0.3m and it sealed the subsoil, consisting of a light to mid-brown sandy clay, which was a maximum of 0.3m thick. Beneath the subsoil, the underlying natural

geology was exposed, consisting of light to mid-orange boulder clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 37
Location Helton
Alignment East/west
Figure Number 8
Maximum Depth 0.65m
Description This trench revealed topsoil to a maximum depth of 0.25m, directly above the subsoil, consisting of mid-brown silty clay, which had a maximum thickness of 0.40m. The subsoil directly overlay the mid-orange boulder clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 38
Location Helton
Alignment North/south
Figure Number 8
Maximum Depth 0.4m
Description Topsoil, measuring 0.2m thick, directly overlay a 0.2m thick layer of light grey silty sand subsoil. The subsoil in turn overlay the natural geology, which consisted of light orange boulder clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 39
Location Setterah Park
Alignment North-east/south-west
Figure Number 8
Maximum Depth 0.54m
Description The topsoil in this trench measured a maximum of 0.24m thick and overlay the light grey clayey-silt subsoil. This in turn sealed the light greyish-orange boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 40
Location Setterah Park
Alignment North-east/south-west
Figure Number 8
Maximum Depth 0.5m
Description Within this trench the topsoil was revealed to be 0.2m thick and sealed the 0.25m thick light grey silty sand subsoil. Beneath the subsoil, the underlying natural geology was exposed in the base of the trench, consisting of light orangish-grey boulder clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 41
Location Setterah Park
Alignment North-east/south-west
Figure Number 8
Maximum Depth 0.3m
Description Topsoil, to a depth of 0.3m, overlay a 0.1m thick layer of mid-orangish-grey sandy silt subsoil. The natural geology, comprising light orange boulder clay, was exposed beneath this subsoil. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 42
Location Setterah Park
Alignment North-east/south-west
Figure Number 8
Maximum Depth 0.45m
Description This trench revealed topsoil, to a depth of 0.2m, sealing the subsoil, which consisted of light grey silty sand and had a maximum thickness of 0.25m. The subsoil sealed the underlying natural geology which was predominantly clayey sand, with small discrete patches of clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 43
Location Helton to Bampton Road
Alignment North/south
Figure Number 8
Maximum Depth 0.55m
Description Topsoil in this trench had a maximum thickness of 0.2m and overlay a 0.35m thick layer of mid-orangish-grey clayey-silt subsoil. Beneath the subsoil, the underlying natural geology was exposed along the base of the trench, consisting of light orangish-grey clayey sand. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 44
Location Helton to Bampton Road
Alignment North/south
Figure Number 9
Maximum Depth 0.45m
Description This trench revealed topsoil, to a depth of 0.2m, sealing a 0.25m thick layer of light grey sandy silt subsoil. The subsoil overlay the natural geology, which consisted of light orangish-grey clayey sand. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 45
Location Helton to Bampton Road
Alignment North-north-west/south-south-east
Figure Number 9
Maximum Depth 0.5m
Description The topsoil within this trench had a maximum depth of 0.37m and directly overlay the light orange boulder clay natural. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 46
Location Helton to Bampton Road
Alignment North-north-west/south-south-east
Figure Number 9
Maximum Depth 0.4m
Description The topsoil in this trench had a maximum depth of 0.4m and directly overlay the light yellowish-orange sandy gravel natural. A single linear feature, 8, was observed in this trench, running broadly east/west. It was exposed for a length of 1.8m and measured 0.9m wide by 0.16m deep. No finds were recovered from the single fill of the feature, which consisted of light greyish-brown clayey-silt.

Trench Number 47
Location Helton to Bampton Road
Alignment North-west/south-east
Figure Number 9
Maximum Depth 1m
Description This trench revealed topsoil to a maximum depth of 0.25m sealing a 0.75m thick layer of mid-orangish-grey sandy silt subsoil, probably deposited by colluvial action. The subsoil directly overlay the mid-greyish-orange boulder clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 48
Location Helton to Bampton Road
Alignment North-west/south-east
Figure Number 9
Maximum Depth 0.73m
Description Topsoil within this trench had a maximum depth of 0.33m and overlay the 0.4m thick subsoil, consisting of a light brown sandy clay. The subsoil in turn sealed the natural geology, which consisted of light orange coarse sands and gravel, with occasional large boulders. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 49
Location Helton to Bampton Road
Alignment North-west/south-east
Figure Number 9
Maximum Depth 0.5m
Description This trench revealed topsoil to a maximum depth of 0.25m, overlying 0.25m of light orangish-grey sandy silt subsoil. The natural geology, which was exposed along the base of the trench, consisted of mid-greyish-orange gravels, with patches of sand and occasional large boulders. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 50
Location Helton to Bampton Road
Alignment North-north-east/South-south-west
Figure Number 9
Maximum Depth 0.5m
Description The topsoil in this trench had a maximum depth of 0.25m and sealed the light greyish-brown clayey sand subsoil, which had a maximum depth of 0.25m. Beneath the subsoil the underlying natural geology, of mid-orangish-brown gravels, was exposed. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 51
Location Helton to Bampton Road
Alignment North-north-west/south-south-east
Figure Number 9
Maximum Depth 0.5m
Description This trench revealed topsoil to a maximum depth of 0.15m overlying a 0.3m thick layer of mid-orangish-brown sandy silt subsoil. This in turn overlay the natural geology, consisting of coarse gravels, containing occasional large boulders. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 52
Location Helton to Bampton Road
Alignment North/south
Figure Number 9
Maximum Depth 0.65m
Description Topsoil within this trench had a maximum depth of 0.25m and it sealed the subsoil, which was a 0.15m thick layer of light brownish-grey gravel and silt. Beneath the subsoil the natural gravels were exposed. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 53
Location Butterwick
Alignment North/south
Figure Number 9
Maximum Depth 0.7m
Description The topsoil in this trench had a maximum depth of 0.2m and sealed the subsoil, which consisted of a 0.3m thick layer of mid to dark greyish-brown sandy silt, containing a high proportion of gravels. The subsoil in turn sealed the underlying natural geology, which consisted of mid-orangish-grey clayey sand. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 54
Location Butterwick to Bampton Road
Alignment North/south
Figure Number 10
Maximum Depth 0.95m
Description This trench revealed topsoil to a maximum depth of 0.3m overlying a 0.35m thick layer of light grey clayey-silt subsoil. The subsoil overlay the natural geology, consisting of light orangish-grey sandy clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 55
Location Butterwick to Bampton Road
Alignment North-east/south-west
Figure Number 10
Maximum Depth 0.75m
Description The topsoil in this trench had a maximum depth of 0.4m and directly overlay the light grey sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 56
Location Bampton
Alignment North-west/south-east
Figure Number 10
Maximum Depth 0.75m
Description This trench revealed topsoil to a maximum depth of 0.3m, on top of the subsoil, which was 0.45m thick. The subsoil consisted of mid-orangish-grey silty sand and sealed the natural geology, which was made up of probable river gravels. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 57
Location Bampton Grange
Alignment North-west/south-east
Figure Number 10
Maximum Depth 0.4m
Description Topsoil within this trench had a maximum depth of 0.35m and directly overlay the greyish-yellow sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 58
Location East of Bampton Grange
Alignment East/west
Figure Number 10
Maximum Depth 0.34m
Description This trench revealed topsoil, to a maximum depth of 0.3m, directly overlying the greyish-yellow sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 59
Location Bampton Grange to Rosgill Road
Alignment North-east/south-west
Figure Number 10
Maximum Depth 0.7m
Description The topsoil within this trench had a maximum depth of 0.3m and sealed the subsoil, which was a maximum of 0.4m deep. The subsoil consisted of mid-brownish-grey sand clay and it overlay the natural geology, comprising mid-grey clayey sand with occasional large boulders. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 60
Location Bampton Grange to Rosgill Road
Alignment East/west
Figure Number 11
Maximum Depth 0.7m
Description The topsoil in this trench had a maximum depth of 0.2m and sealed a 0.4m thick layer of light to mid-greyish-brown clayey-silt subsoil. The subsoil overlay the natural geology, which consisted of fragmentary limestone bedrock, with small patches of sandy clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 61
Location Bampton Grange to Rosgill Road
Alignment North-west/south-east
Figure Number 11
Maximum Depth 0.75m
Description This trench revealed topsoil to a maximum depth of 0.3m, sealing the subsoil, which comprised a 0.45m thick layer of mid-brown silty clay. Beneath the subsoil, the natural geology, consisting of reddish-brown sandy clay, was exposed along the base of the trench. The only feature encountered was a modern water pipe, feeding a trough.

Trench Number 62
Location Bampton Grange to Rosgill Road
Alignment North-east/south-west

Figure Number 11
Maximum Depth 0.8m
Description Topsoil, to a depth of 0.3m, sealed the 0.5m thick light to mid-brownish-grey sandy silt subsoil, which in turn sealed the light grey clayey sand natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 63
Location Bampton Grange to Rosgill Road
Alignment North-north-west/south-south-east
Figure Number 11
Maximum Depth 0.6m
Description The topsoil in this trench was 0.25m thick and overlay the 0.35m thick light to mid-brownish-grey sandy clay subsoil. The subsoil directly overlay the mid-orangish-brown sandy clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 64
Location Bampton Grange to Rosgill Road
Alignment North-north-west/south-south-east
Figure Number 11
Maximum Depth 0.85m
Description This trench revealed topsoil, to a maximum depth of 0.4m, directly overlying the limestone bedrock, which contained small patches of yellow sand. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 65
Location Bampton Grange to Rosgill Road
Alignment North/south
Figure Number 11
Maximum Depth 1.1m
Description This trench revealed topsoil to a maximum depth of 0.4m, on top of the subsoil, which was 0.7m thick and consisted of mid-brownish yellow clayey-silt. The subsoil overlay the natural geology, which was rather variable, consisting of clayey sand, but with large boulder inclusions at the northern end of the trench, and gravel inclusions further south. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 66
Location Bampton Grange to Rosgill Road
Alignment North-north-west/south-south-east
Figure Number 11
Maximum Depth 0.9m
Description The topsoil in this trench had a depth of 0.3m and overlay a 0.6m thick layer of light to mid-brown silty clay subsoil. The subsoil in turn overlay the natural geology, which consisted of fragmentary limestone bedrock. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 67
Location Bampton Grange to Rosgill Road
Alignment North-west/south-east
Figure Number 11
Maximum Depth 0.4m

Description The topsoil in this trench had a maximum depth of 0.4m and directly overlay the light greyish-yellow limestone bedrock. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 68
Location Rosgill
Alignment North-west/south-east
Figure Number 11
Maximum Depth 0.4m
Description This trench revealed only topsoil, to a maximum depth of 0.4m, directly overlying the limestone bedrock. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 69
Location Rosgill
Alignment East-north-east/west-south-west
Figure Number 11
Maximum Depth 0.55m
Description The topsoil in this trench was 0.2m deep and sealed the subsoil, which had a maximum depth of 0.35m. The subsoil consisted of light yellowish-brown clayey-silt and overlay the fragmentary limestone bedrock, which contained patches of clean light brown sands. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 70
Location Rosgill
Alignment North-north-west/south-south-east
Figure Number 11
Maximum Depth 0.4m
Description The topsoil in this trench had a maximum depth of 0.3m and directly overlay the natural geology, which consisted of light to mid-orange sandy clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 71
Location Rosgill
Alignment East-north-east/west-south-west
Figure Number 11
Maximum Depth 0.3m
Description This trench revealed only topsoil, to a depth of 0.25m, directly overlying the light yellowish-grey sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 72
Location Rosgill to Shap Road
Alignment North-west/south-east
Figure Number 12
Maximum Depth 0.55m
Description The topsoil in this trench had a maximum depth of 0.3m and directly overlay the 0.2m thick subsoil, consisting of light to mid-greyish-brown sandy silt. The subsoil, in turn, overlay the light yellowish-brown sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 73
Location Rosgill to Shap Road
Alignment North-north-west/south-south-east
Figure Number 12
Maximum Depth 0.7m
Description This trench revealed only topsoil, to a depth of 0.45m, directly overlying the light yellowish-brown sandy clay natural geology. Some small patches of the limestone bedrock were also exposed towards the southern end of the trench. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 74
Location Rosgill to Shap Road
Alignment North-north-west/south-south-east
Figure Number 12
Maximum Depth 0.75m
Description The ploughsoil in this trench had a maximum depth of 0.65m and directly overlay the natural geology, which consisted of mid-yellow sand, with bands of pink clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 75
Location Rosgill to Shap Road
Alignment East-north-east/west-south-west
Figure Number 12
Maximum Depth 0.75m
Description This trench revealed topsoil, to a depth of 0.3m, directly overlying the natural geology, which was a mid-brown sandy clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 76
Location High Buildings, Shap
Alignment West-north-west/east-south-east
Figure Number 12
Maximum Depth 0.9m
Description The topsoil in this trench had a depth of 0.3m, and directly overlay the natural geology, which consisted of sandy clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 77
Location High Buildings, Shap
Alignment North-north-east/south-south-west
Figure Number 12
Maximum Depth 0.8m
Description The topsoil in this trench had a maximum depth of 0.5m and directly overlay the mid-brownish-yellow sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 78
Location High Buildings, Shap
Alignment East/west
Figure Number 12
Maximum Depth 0.7m

Description This trench revealed topsoil to a maximum depth of 0.3m, sealing a 0.25m thick layer of mid-reddish-brown clayey-silt subsoil. The subsoil overlay the somewhat varied natural geology, which consisted of clays in a variety of colours, including yellow, pink and grey. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 79
Location High Buildings, Shap
Alignment North-north-east/south-south-west
Figure Number 12
Maximum Depth 0.55m
Description This trench revealed only topsoil, to a depth of 0.4m, directly overlying the light greyish-orange sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 80
Location High Buildings, Shap
Alignment East/west
Figure Number 12
Maximum Depth 0.25m
Description The topsoil in this trench had a maximum depth of 0.25m and directly overlay the fragmentary limestone bedrock. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 81
Location High Buildings, Shap
Alignment North/south
Figure Number 12
Maximum Depth 0.55m
Description The topsoil in this trench had a maximum depth of 0.35m and directly overlay the light brown sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 82
Location High Buildings, Shap
Alignment East/west
Figure Number 12
Maximum Depth 0.43m
Description This trench revealed only topsoil to a maximum depth of 0.25m directly overlying the light greyish-orange sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 83
Location High Buildings, Shap
Alignment North/south
Figure Number 12
Maximum Depth 0.5m
Description The topsoil in this trench was 0.2m deep and sealed a 0.3m thick layer of light reddish-brown silty sand subsoil, which itself sealed the dark orangish-brown sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 84
Location High Buildings, Shap
Alignment East/west
Figure Number 12
Maximum Depth 0.75m
Description The topsoil had a maximum depth of 0.35m and sealed a 0.4m thick layer of light reddish-brown sandy silt subsoil, which in turn sealed the mid-orangish-brown sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 85
Location High Buildings, Shap
Alignment North/south
Figure Number 12
Maximum Depth 0.64m
Description Within this trench, the topsoil had a maximum depth of 0.25m and sealed the subsoil, which was a maximum of 0.35m deep. The subsoil consisted of light reddish-brown sandy silt and it overlay the mid-orangish-brown sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 86
Location High Buildings, Shap
Alignment West-north-west/east-south-east
Figure Number 12
Maximum Depth 0.95m
Description This trench revealed topsoil, to a maximum depth of 0.2m, directly overlying the 0.7m thick mid-greyish-brown silty clay subsoil. The subsoil in turn sealed the underlying natural geology, which consisted of fragmentary limestone bedrock. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 87
Location High Buildings, Shap
Alignment North-north-west/south-south-east
Figure Number 12
Maximum Depth 0.8m
Description The topsoil in this trench had a maximum depth of 0.23m and sealed the subsoil, which was itself a maximum of 0.22m thick. The subsoil consisted of light orangish-grey silty clay and overlay the natural limestone bedrock, which contained small patches of orange sand. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 88
Location High Buildings, Shap, North-east of Shap Abbey
Alignment North-west/south-east
Figure Number 12
Maximum Depth 0.45m
Description Within this trench, topsoil was revealed to a maximum depth of 0.2m, overlying the subsoil, which was 0.25m thick and consisted of light brown clayey-silt. The subsoil directly overlay the limestone bedrock natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 89
Location High Buildings, Shap, North-east of Shap Abbey
Alignment North-east/south-west
Figure Number 12
Maximum Depth 0.66m
Description The topsoil in this trench had a maximum depth of c0.4m, although a diffuse boundary with the underlying natural geology made it difficult to be more accurate. The natural geology consisted of mid-greyish-orange sandy clays. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 90
Location High Buildings, Shap, North-east of Shap Abbey
Alignment North-west/south-east
Figure Number 12
Maximum Depth 0.6m
Description The topsoil in this trench had a maximum depth of c0.4m and directly overlay the light to mid-reddish-brown sandy clay natural geology. The boundary between the two layers encountered was again rather diffuse, making their depths difficult to judge accurately. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 91
Location High Buildings, Shap, North-east of Shap Abbey
Alignment North-east/south-west
Figure Number 12
Maximum Depth 0.55m
Description This trench revealed only topsoil, to a maximum depth of c0.4m, directly overlying the light to mid-reddish-brown sandy clay natural. The boundary between the two layers encountered was again rather diffuse, making their depths difficult to judge accurately. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 92
Location High Buildings, Shap, North-east of Shap Abbey
Alignment North-west/south-east
Figure Number 12
Maximum Depth 0.55m
Description This trench revealed only topsoil, to a maximum depth of 0.4m, directly overlying the light to mid-reddish-brown sandy clay natural. The boundary between the two layers encountered was again rather diffuse, making their depths difficult to judge accurately. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 93
Location High Buildings, Shap, North-east of Shap Abbey
Alignment North-east/south-west
Figure Number 12
Maximum Depth 0.4m
Description This trench revealed topsoil, to a maximum depth of 0.4m, directly overlying the light to mid-reddish-brown sandy clay natural. The boundary between the two layers encountered was again rather diffuse, making their depths difficult to judge accurately. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 94
Location Roughley Lane, Shap
Alignment North-west/south-east
Figure Number 13
Maximum Depth 0.55m
Description The topsoil in this trench had a maximum depth of 0.4m and sealed the 0.15m thick subsoil, consisting of light yellowish-brown clayey-silt. The subsoil itself sealed the light yellowish-grey clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 95
Location Roughley Lane, Shap
Alignment North-west/south-east
Figure Number 13
Maximum Depth 0.76m
Description This trench revealed topsoil to a maximum depth of 0.2m, overlying the subsoil, which had a maximum depth of 0.45m. The subsoil consisted of mid-brown sandy silt and overlay the natural geology, consisting of mid-reddish-brown sandy clay. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 96
Location West of Shap
Alignment East-north-east/west-south-west
Figure Number 13
Maximum Depth 0.9m
Description The topsoil in this trench had a maximum depth of 0.3m and overlay the 0.6m thick mid-reddish-brown clayey sand subsoil. The subsoil sealed the underlying natural geology, consisting of mid-reddish-brown sandy clay. A single feature was observed in this trench, comprising a modern animal burial.

Trench Number 97
Location West of Shap
Alignment North-west/south-east
Figure Number 14
Maximum Depth 0.25m
Description This trench revealed only topsoil, to a maximum depth of 0.3m, directly overlying the mid-reddish-brown sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

Trench Number 98
Location West of Shap
Alignment North/south
Figure Number 14
Maximum Depth 0.3m
Description This trench revealed the topsoil, to a depth of 0.3m, directly overlying the mid-greyish-yellow sandy clay natural geology. Two modern land drains were observed truncating the natural within this trench.

Trench Number 99
Location West of Shap
Alignment North/south
Figure Number 14

Maximum Depth 0.3m
Description The topsoil in this trench had a maximum depth of 0.3m and directly overlay the mid-yellowish-grey sandy clay natural geology. A single land drain was the only feature observed within this trench.

Trench Number 100
Location Kemp Howe, Shap
Alignment North-north-west/south-south-east
Figure Number 14
Maximum Depth 0.4m
Description This trench revealed only topsoil, to a maximum depth of 0.3m, directly overlying the mid-orangish-yellow sandy clay natural geology. No features or finds of an archaeological nature were encountered in this trench.

APPENDIX 3: CONTEXT LIST

CONTEXT	TRENCH	DESCRIPTION
<i>1</i>	34	Topsoil
<i>2</i>	34	Cobbled surface in south end of TR34
<i>3</i>	34	Packing layer for surface on top of natural
<i>4</i>	34	Cobbled surface in middle part of TR34
<i>5</i>	34	Cut for modern sewerage drain
<i>6</i>	34	Backfill of sewerage drain <i>5</i>
<i>7</i>	46	Fill of linear <i>8</i>
<i>8</i>	46	Linear cut

APPENDIX 4: FINDS SUMMARY

Trench	Context	Object number	Quantity	Material	Description	Date range
34	<i>I</i>	100	7	Pottery	Porcelain	Late eighteenth - twentieth century
34	<i>I</i>	100	1	Pottery	Beige-glazed white earthenware	Late eighteenth - twentieth century
34	<i>I</i>	100	11	Pottery	White-glazed white earthenware	Late eighteenth - twentieth century
34	<i>I</i>	100	1	Pottery	Majolica	Late eighteenth - early twentieth century
34	<i>I</i>	100	1	Pottery	Stoneware	Eighteenth - twentieth century
34	<i>I</i>	100	1	Pottery	Green-glazed reduced fabric	Fourteenth - eighteenth century
34	<i>I</i>	101	1	Clay tobacco pipe	Stem, medium bore	Eighteenth - early twentieth century
34	<i>I</i>	102	3	Glass	Very light turquoise (bottle)	Eighteenth - early twentieth century
34	<i>I</i>	103	1	Copper alloy	Handle	Post-medieval
34	<i>I</i>	104	1	Iron	Large cone or socketed spike	Not closely dateable
34	<i>I</i>	105	1	Bone	Goose-sized bird	Not closely dateable
34	<i>I</i>	106	1	Potash	Lump	Not closely dateable

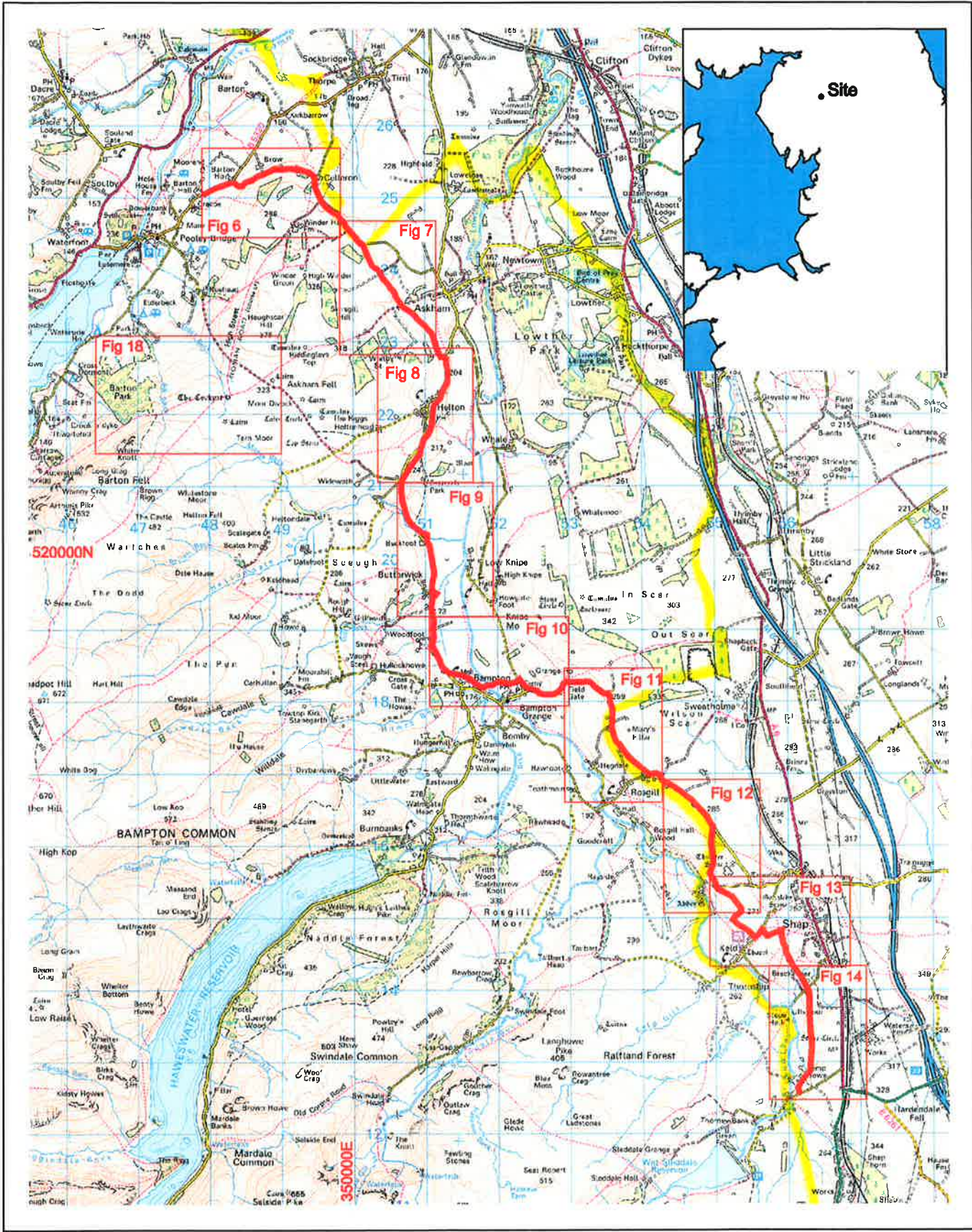
ILLUSTRATIONS AND PLATES

ILLUSTRATIONS

- Figure 1: Pipeline Route and Drawing Location Map
- Figure 2: Survey Areas Location Map
- Figure 3: Sites 73a and 73b, Bampton Earthworks
- Figure 4: Site 125, Setterah Park Earthwork
- Figure 5: Site 127, Helton Earthwork, Site 128, Helton Ridge and Furrow
- Figure 6: Detailed Trench Location Plan (Trenches 1-11)
- Figure 7: Detailed Trench Location Plan (Trenches 12-25)
- Figure 8: Detailed Trench Location Plan (Trenches 26-43)
- Figure 9: Detailed Trench Location Plan (Trenches 44-53)
- Figure 10: Detailed Trench Location Plan (Trenches 54-59)
- Figure 11: Detailed Trench Location Plan (Trenches 60-71)
- Figure 12: Detailed Trench Location Plan (Trenches 72-93)
- Figure 13: Detailed Trench Location Plan (Trenches 94-96)
- Figure 14: Detailed Trench Location Plan (Trenches 97-100)
- Figure 15: Watching Brief Areas A, B and C
- Figure 16: Watching Brief Areas D, E and F
- Figure 17: Section Through Track **101**, Watching Brief Area F
- Figure 18: Line of damaged bridle way

PLATES

- Plate 1: Possible Bank, Site 127, within Trench 32
- Plate 2: Cobbled Surface **2**, within Trench 34
- Plate 3: Cobbled Surface **4**, within Trench 34
- Plate 4: Linear Feature **8**, within Trench 46
- Plate 5: Laying of pipe in watching brief Area D
- Plate 6: Trackway on the line of the putative Roman road in Area F
- Plate 7: Excavation through trackway on the line of the putative Roman road, Area F
- Plate 8: Wall **100**, south of the trackway, Area F
- Plate 9: Typical damage to the edges of the Askham Fell Bridle way
- Plate 10: Damage to the Askham Fell Bridle way, approaching The Cockpit stone circle (AF 86)
- Plate 11: Deep wheel rut damage to the Askham Fell Bridle way



based upon the Ordnance Survey 1:100,000
 with the permission of the controller of HMSO
 © Crown Copyright



Figure 1: Pipeline route and drawing location map

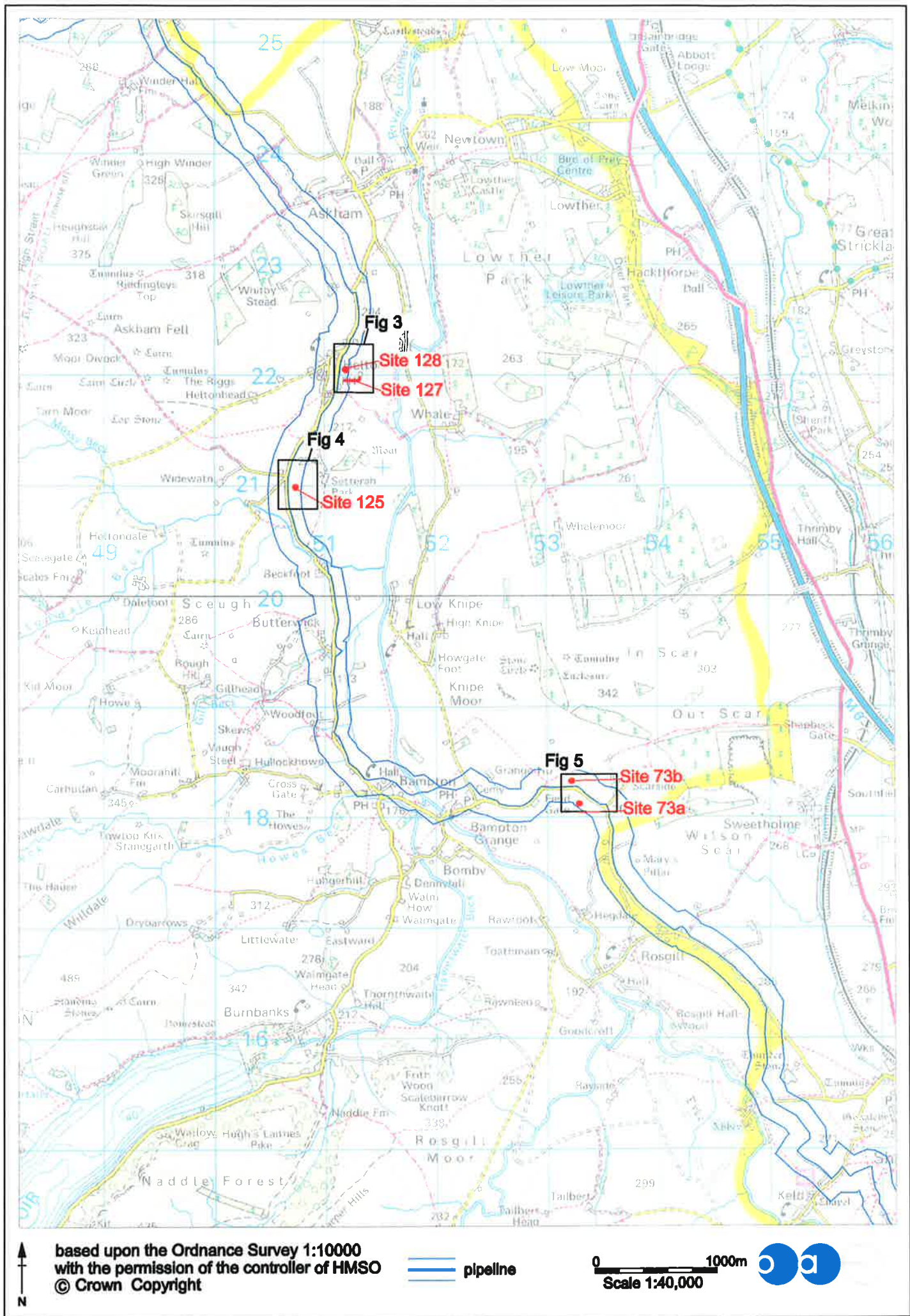
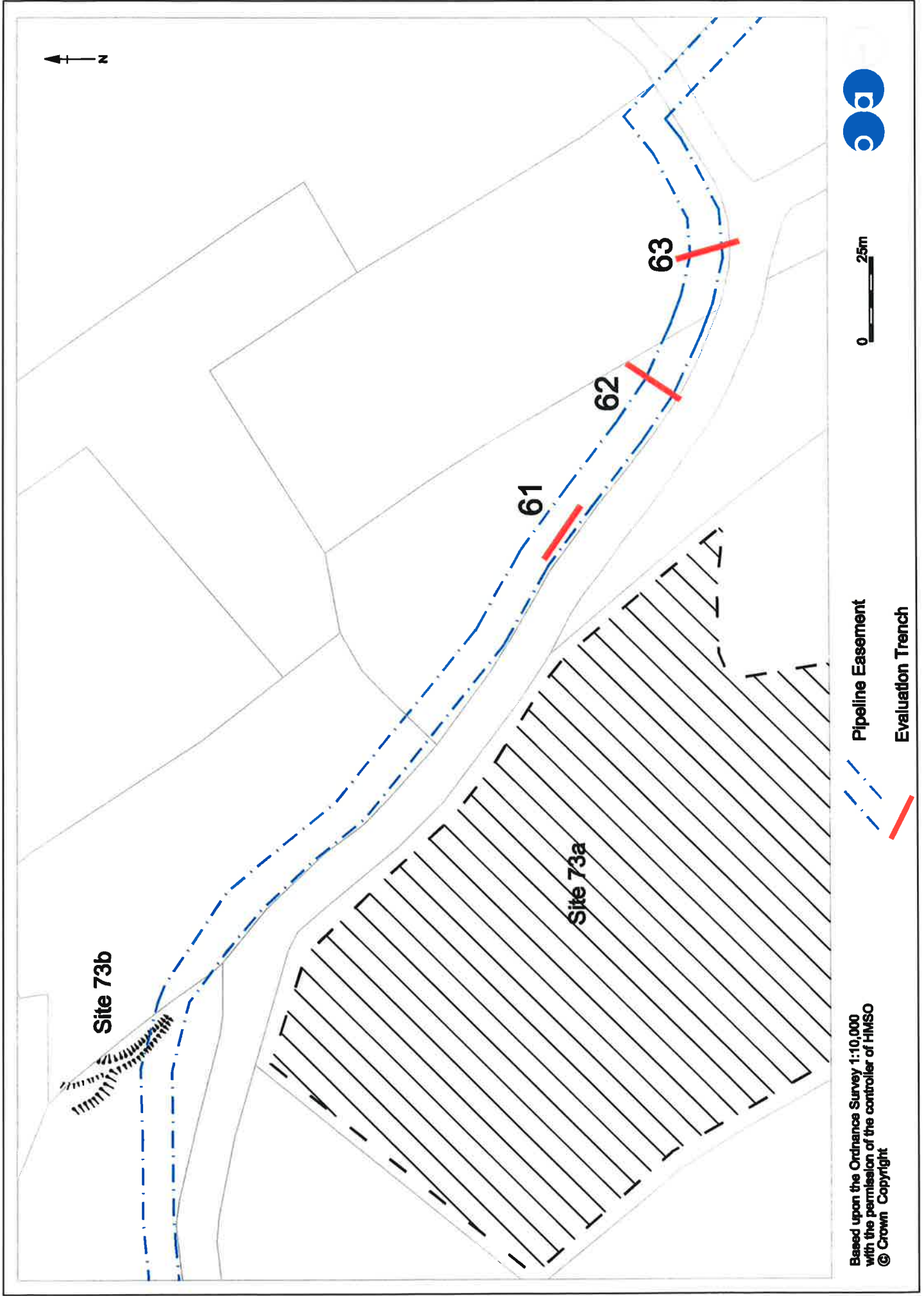


Figure 2: Survey Areas Location Map



Based upon the Ordnance Survey 1:10,000
with the permission of the controller of HMSO
© Crown Copyright

Figure 3: Sites 73a and 73b, Bampton Earthworks

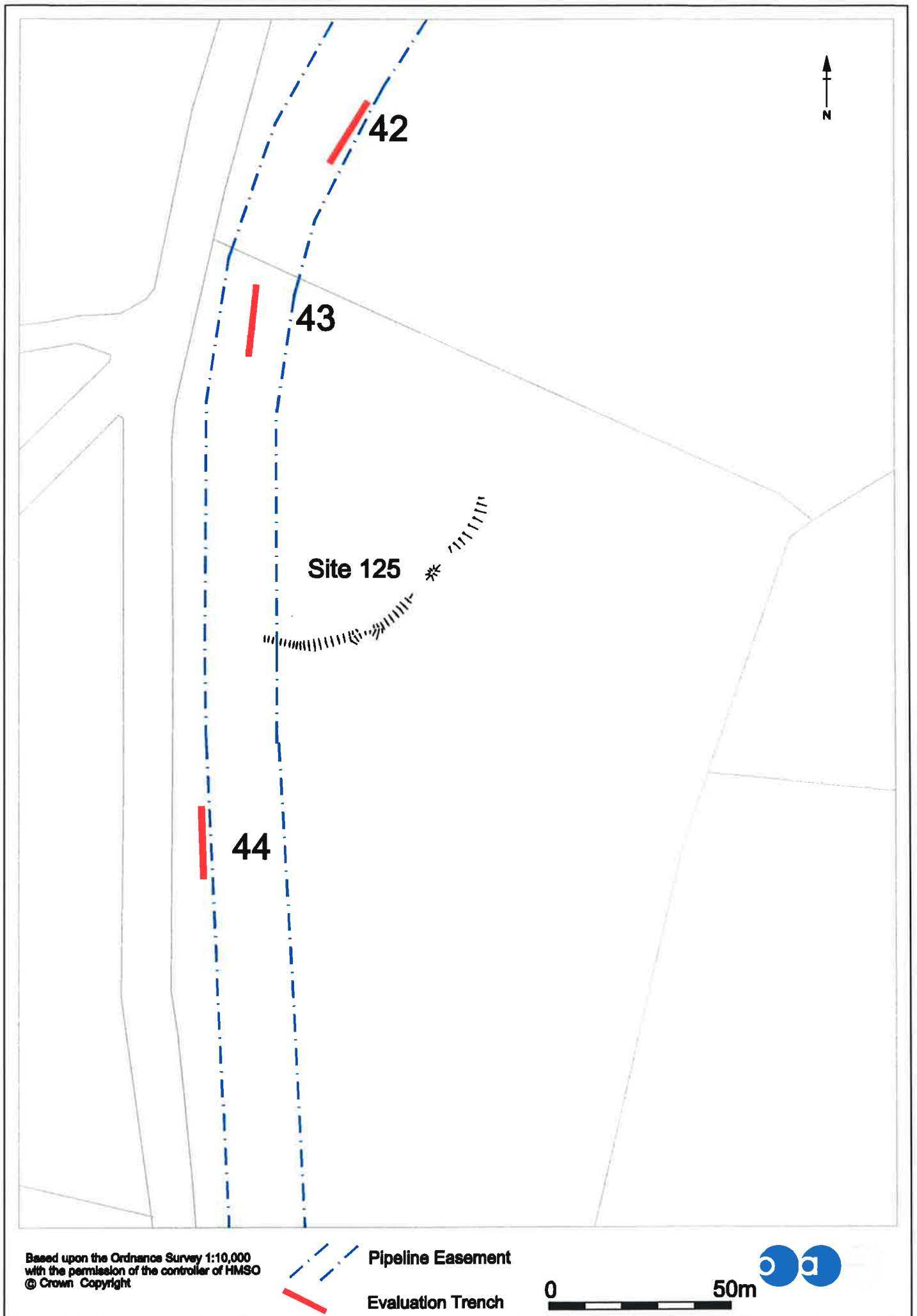
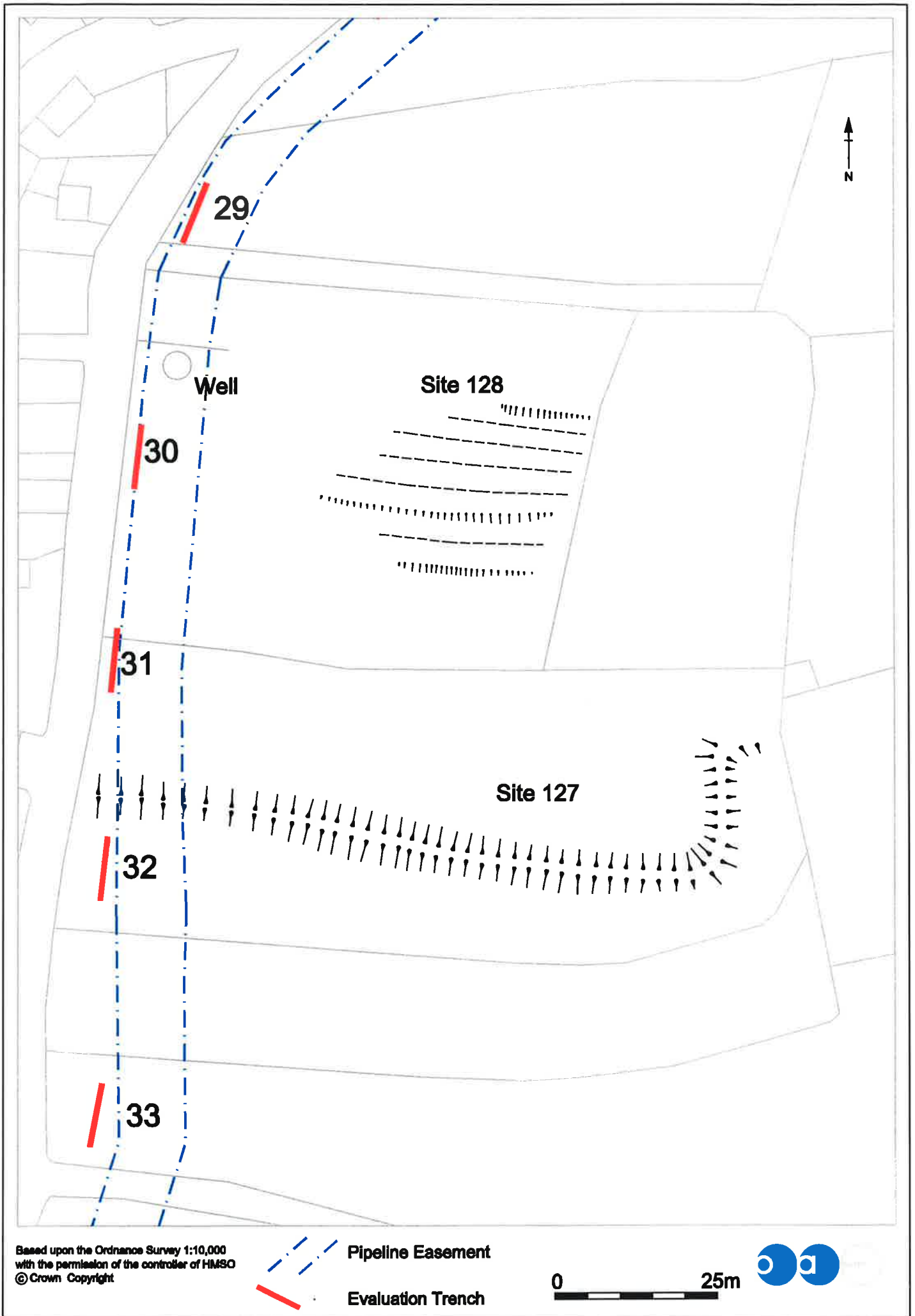




Figure 4: Site 125, Setterah Park Earthwork

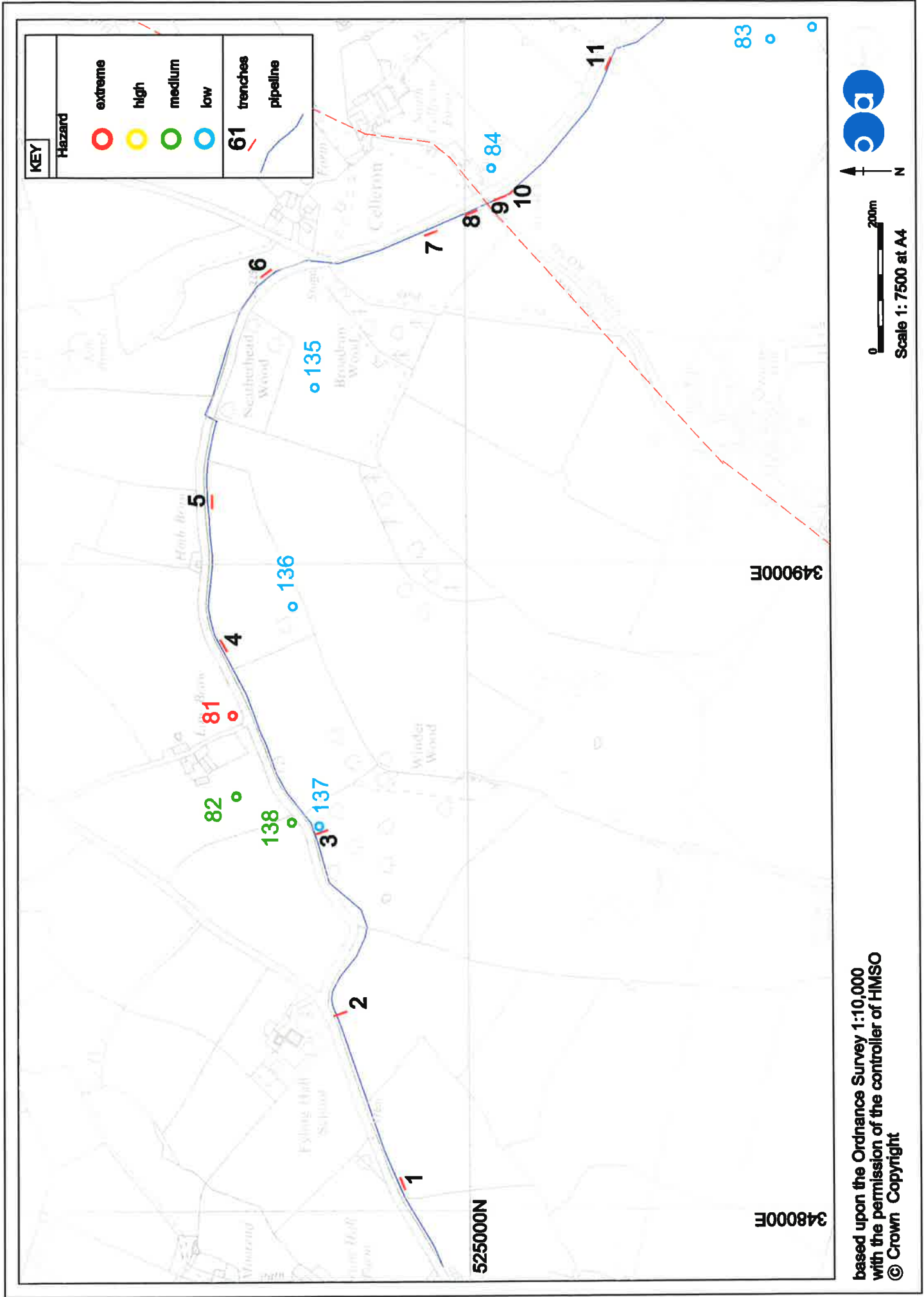


Based upon the Ordnance Survey 1:10,000
with the permission of the controller of HMSO
© Crown Copyright

 Pipeline Easement
 Evaluation Trench

0  25m 

Figure 5: Site 127 Helton Earthwork; Site 128, Helton Ridge and Furrow



based upon the Ordnance Survey 1:10,000
with the permission of the controller of HMSO
© Crown Copyright

Figure 6: Detailed Trench Location Plan (Trenches 1-11)

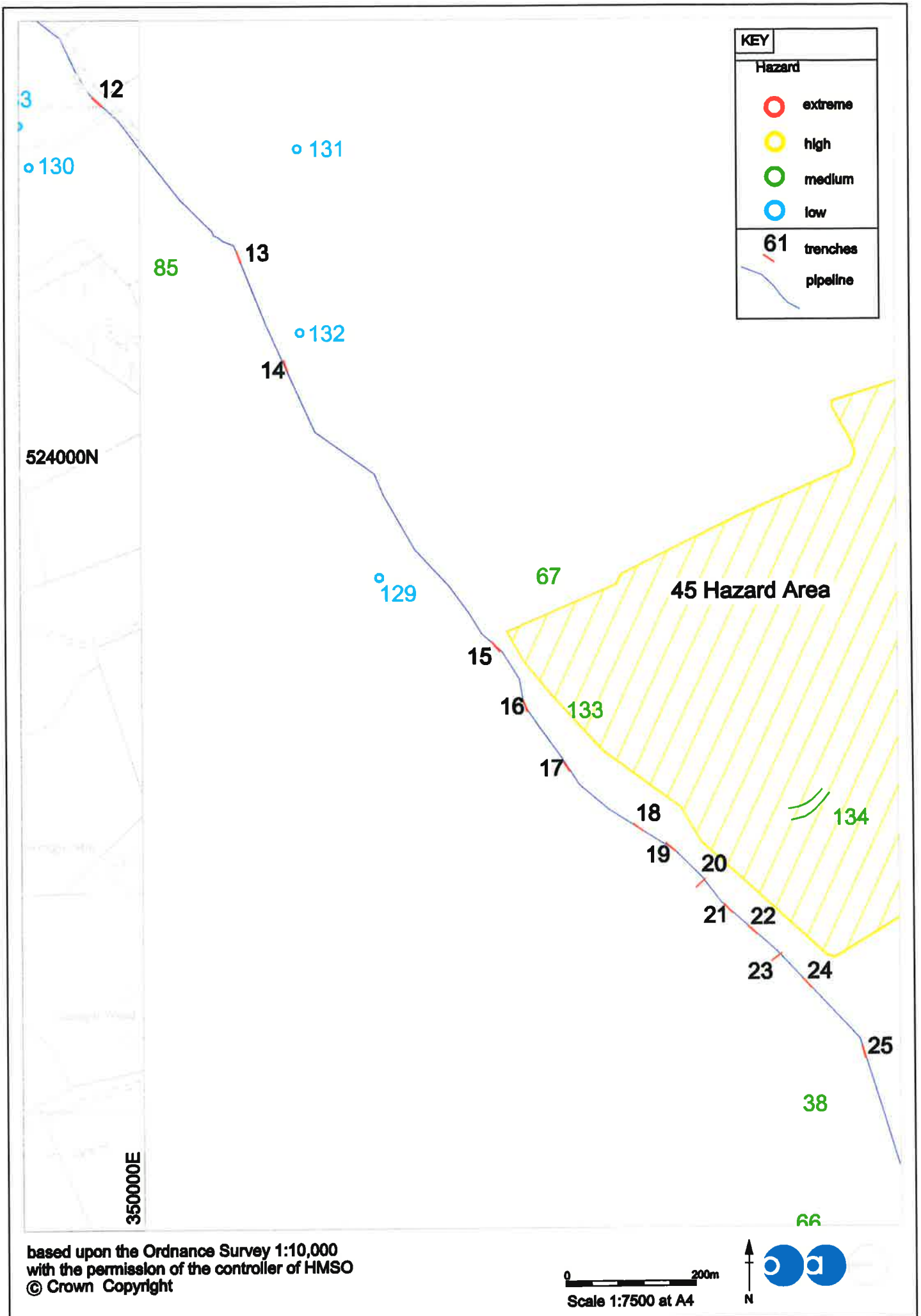
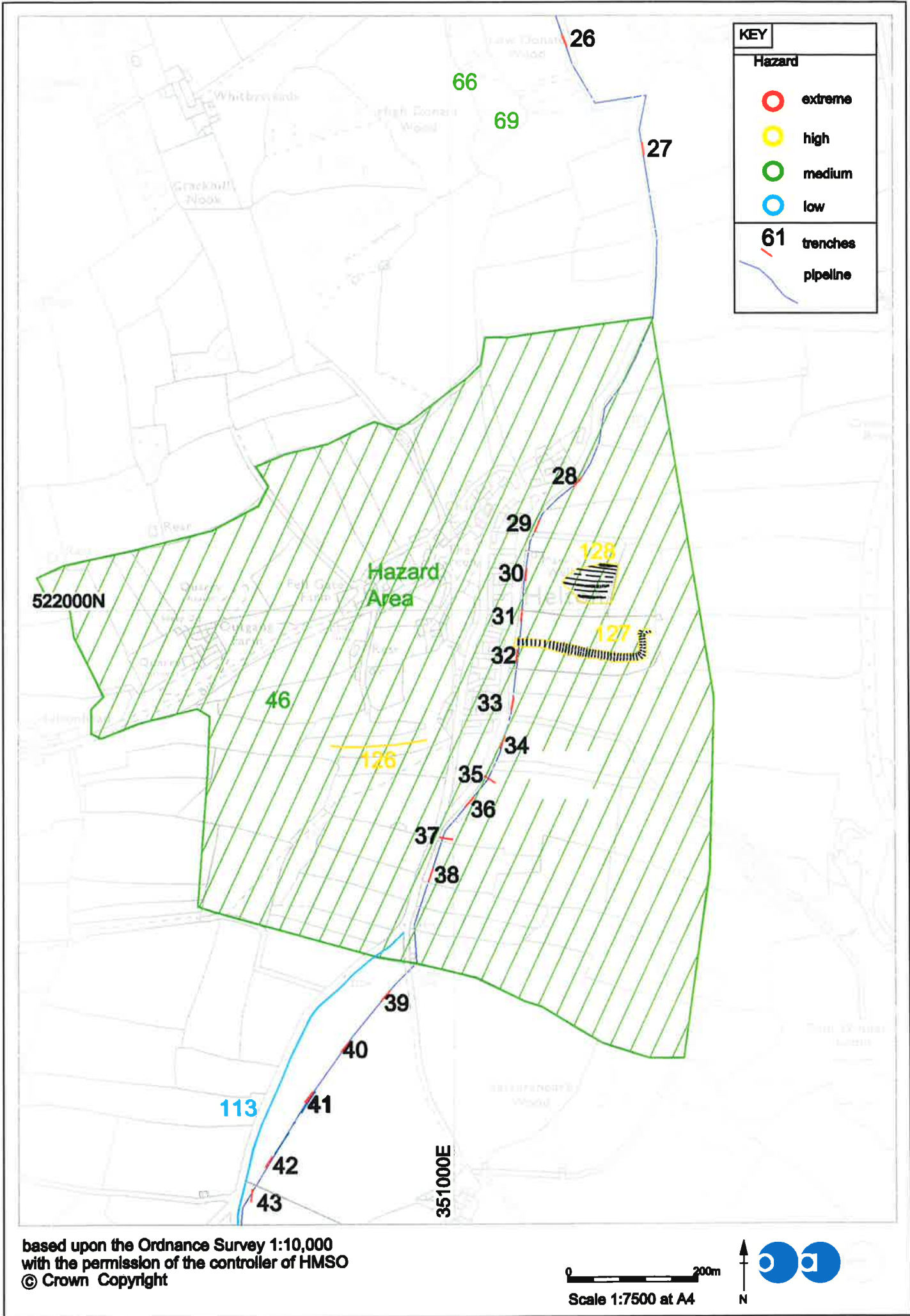


Figure 7: Detailed Trench Location Plan (Trenches 12-25)



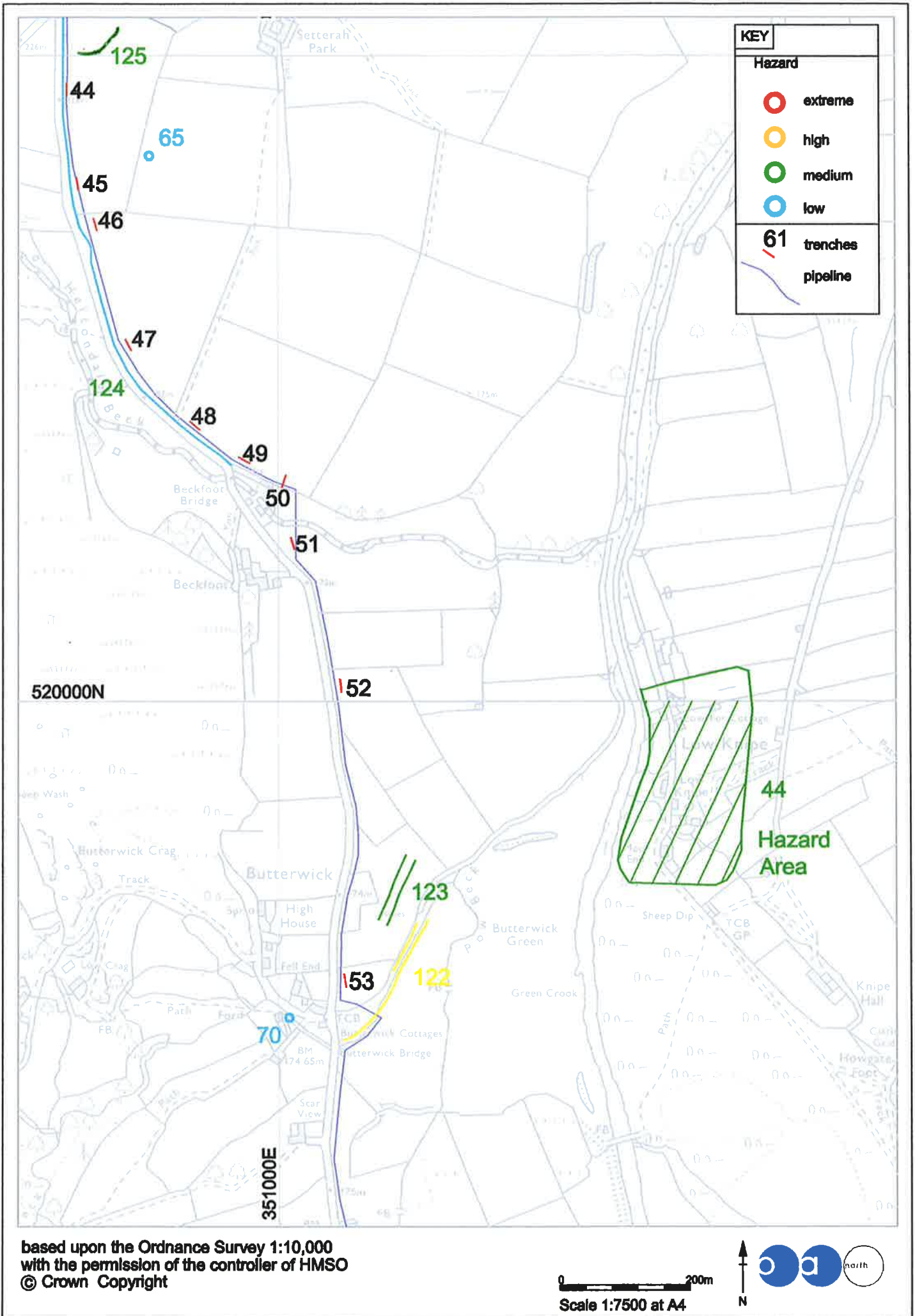
based upon the Ordnance Survey 1:10,000
with the permission of the controller of HMSO
© Crown Copyright

0 200m

Scale 1:7500 at A4



Figure 8: Detailed Trench Location Plan (Trenches 26-43)



based upon the Ordnance Survey 1:10,000
 with the permission of the controller of HMSO
 © Crown Copyright

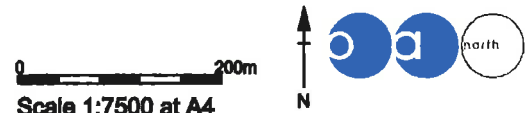
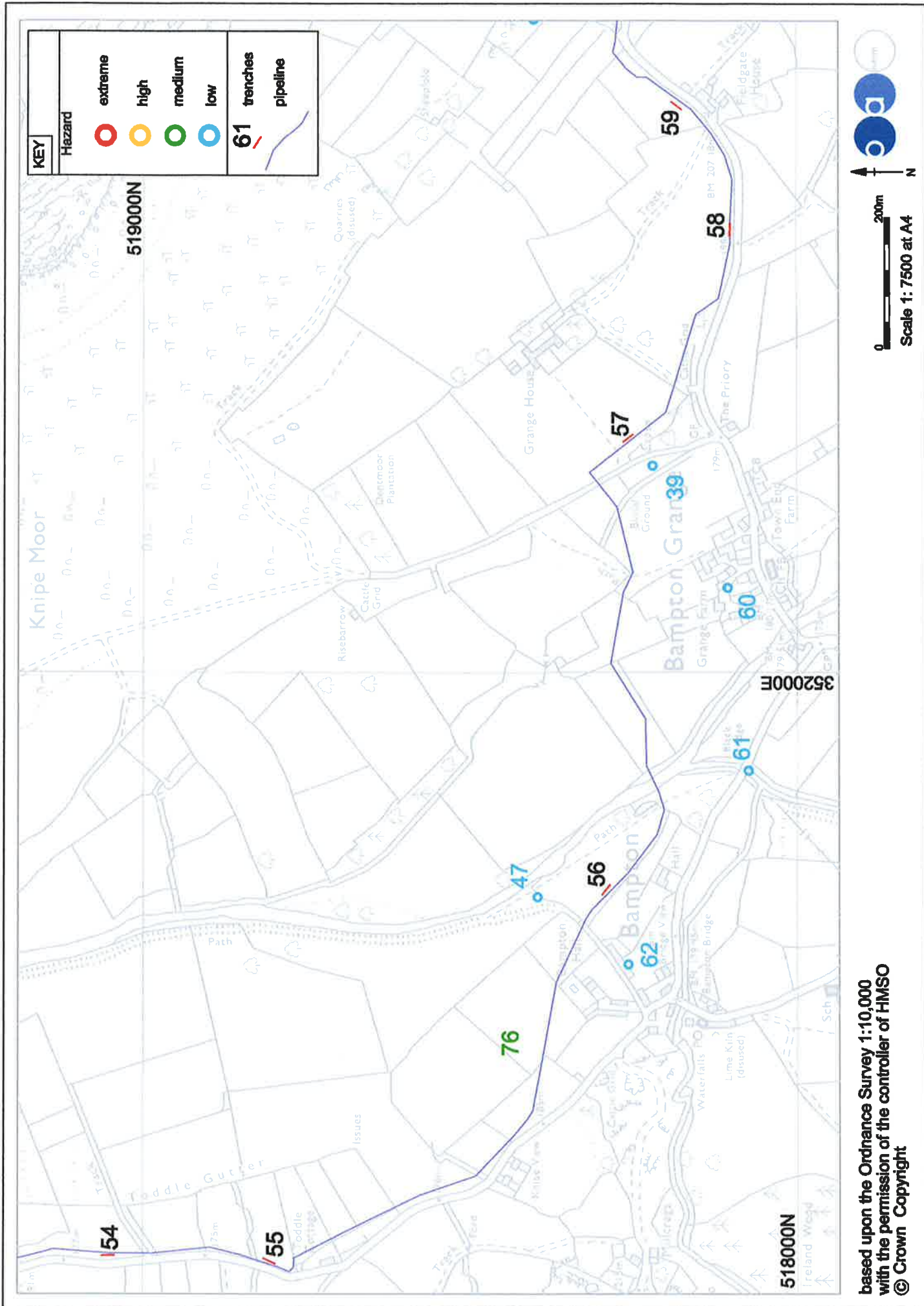
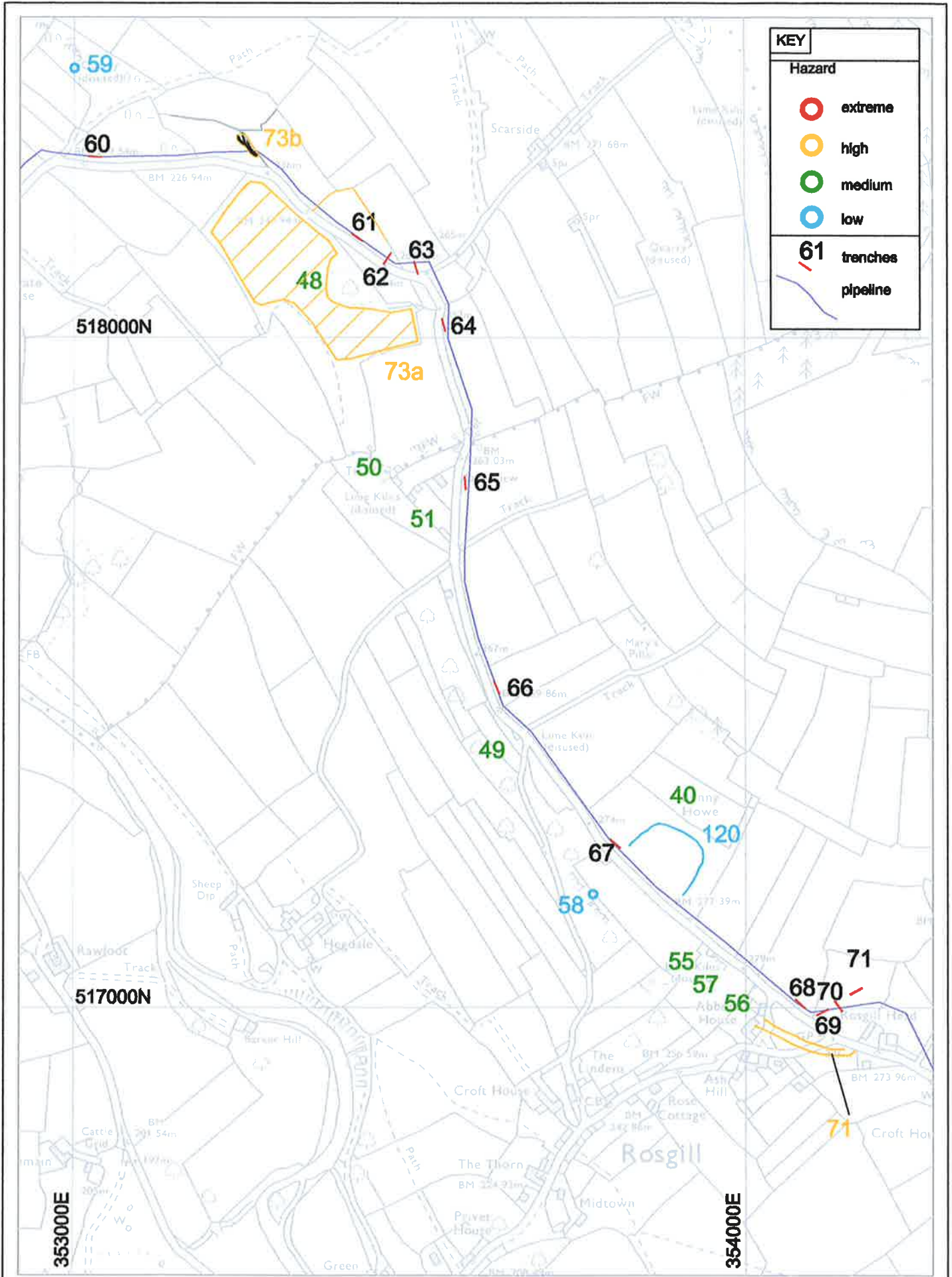


Figure 9: Detailed Trench Location Plan (Trenches 44-53)



based upon the Ordnance Survey 1:10,000 with the permission of the controller of HMSO © Crown Copyright

Figure 10: Detailed Trench Location Plan (Trenches 54-59)

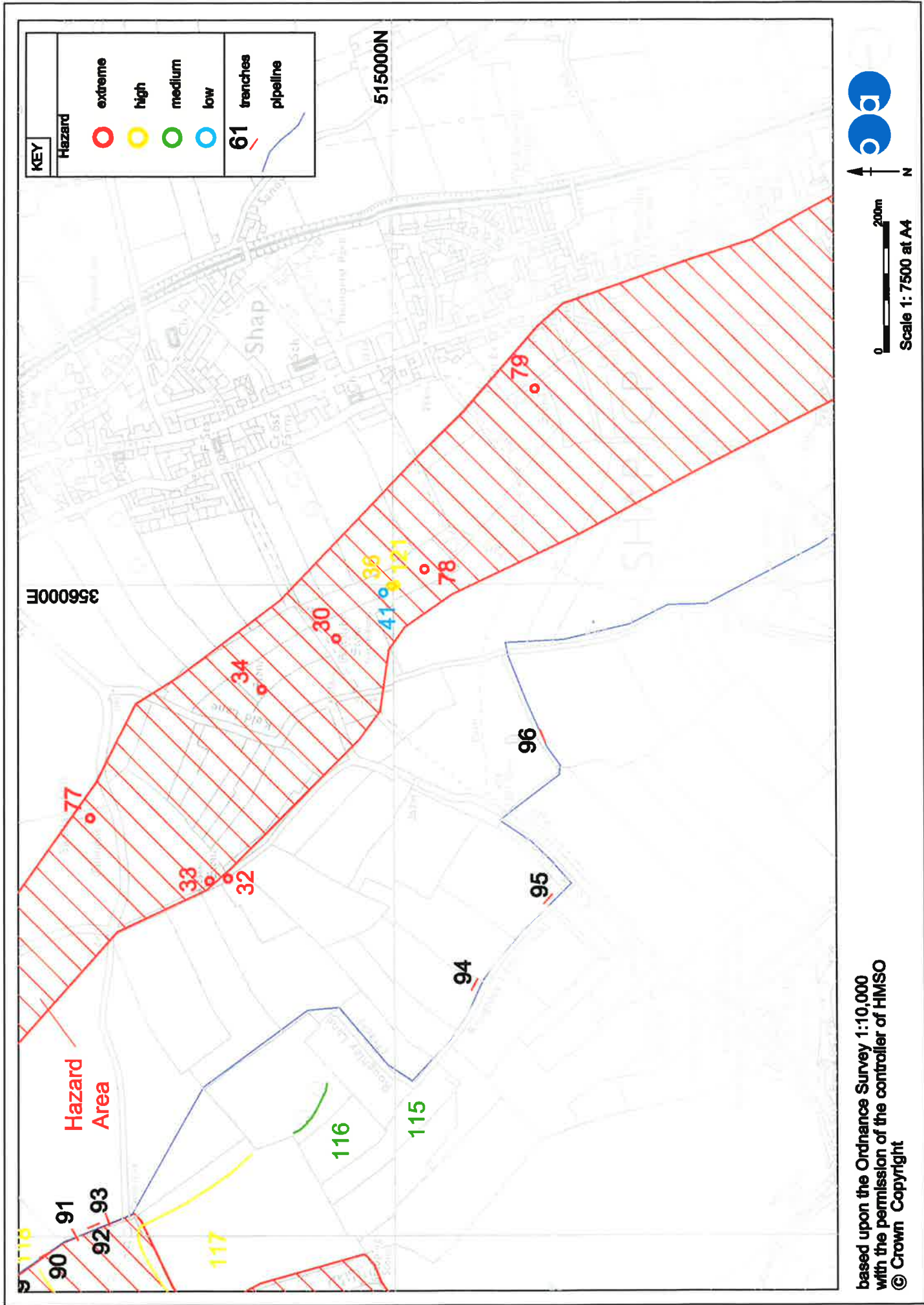


KEY	
Hazard	
○	extreme
○	high
○	medium
○	low
—	trenches
—	pipeline

based upon the Ordnance Survey 1:10,000
with the permission of the controller of HMSO
© Crown Copyright

0 200m
Scale 1:7500 at A4

Figure 11: Detailed Trench Location Plan (Trenches 60-71)



based upon the Ordnance Survey 1:10,000
with the permission of the controller of HMSO
© Crown Copyright

Figure 13: Detailed Trench Location Plan (Trenches 94-96)

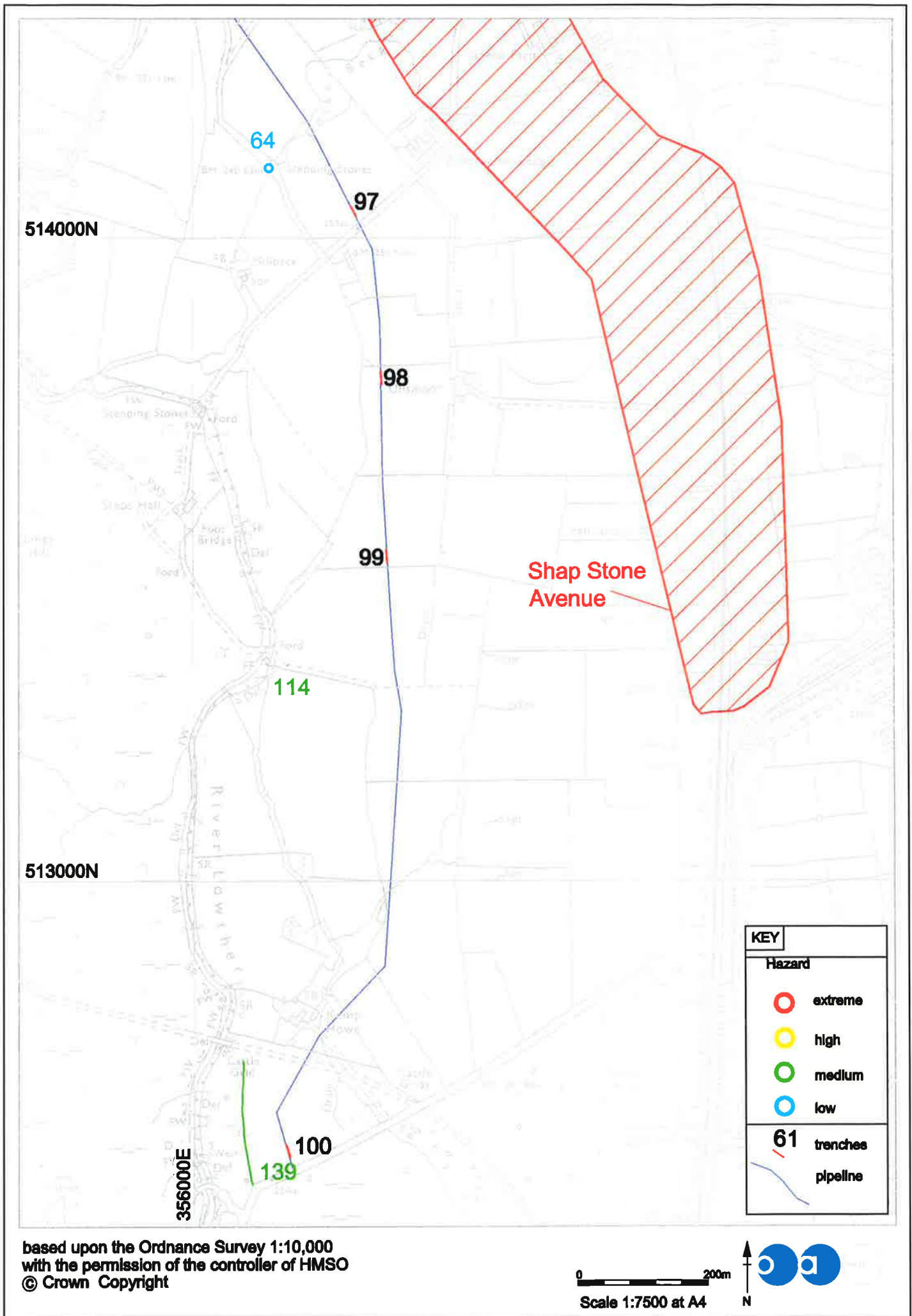
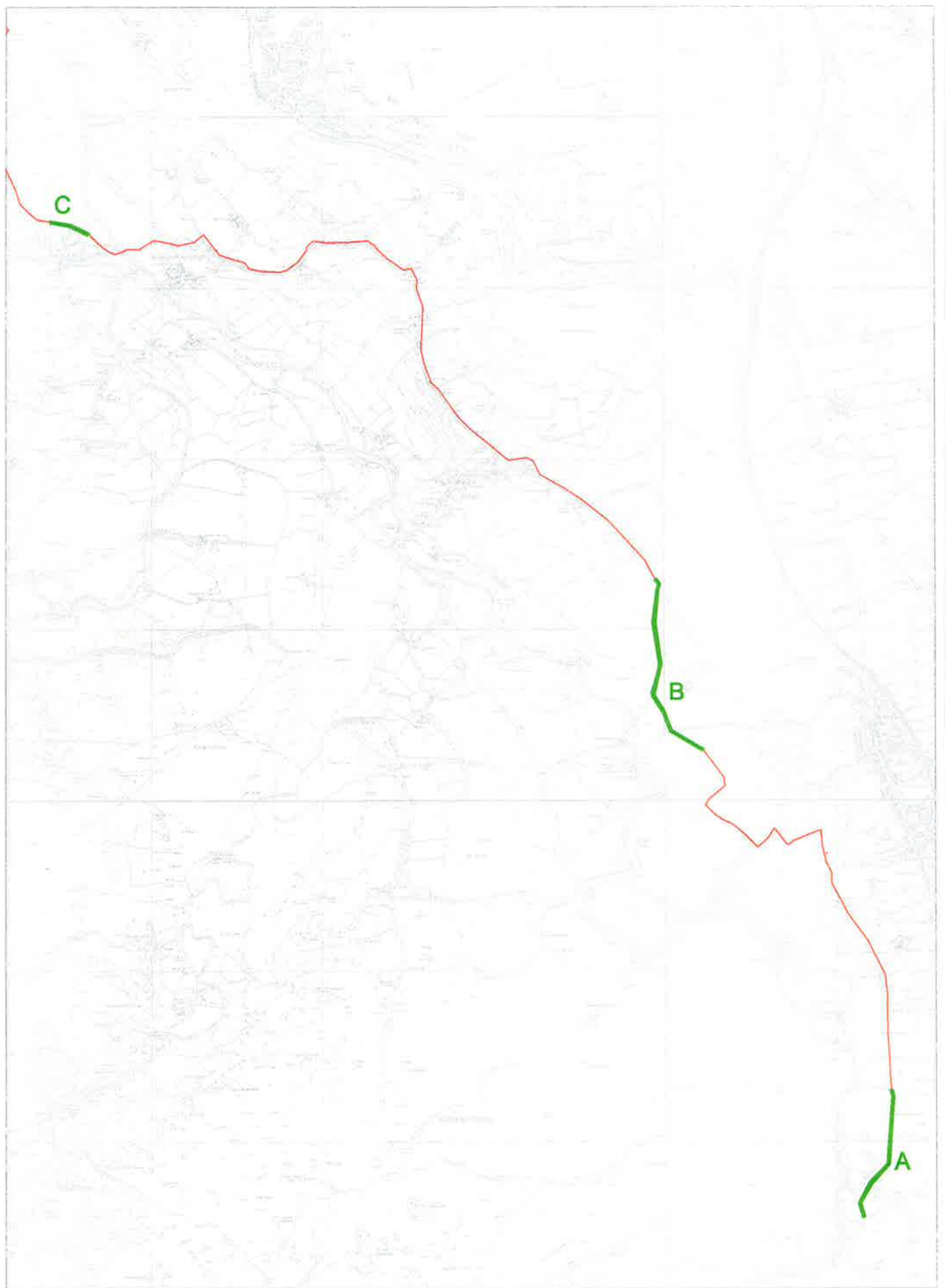


Figure 14: Detailed Trench Location Plan (Trenches 97-100)



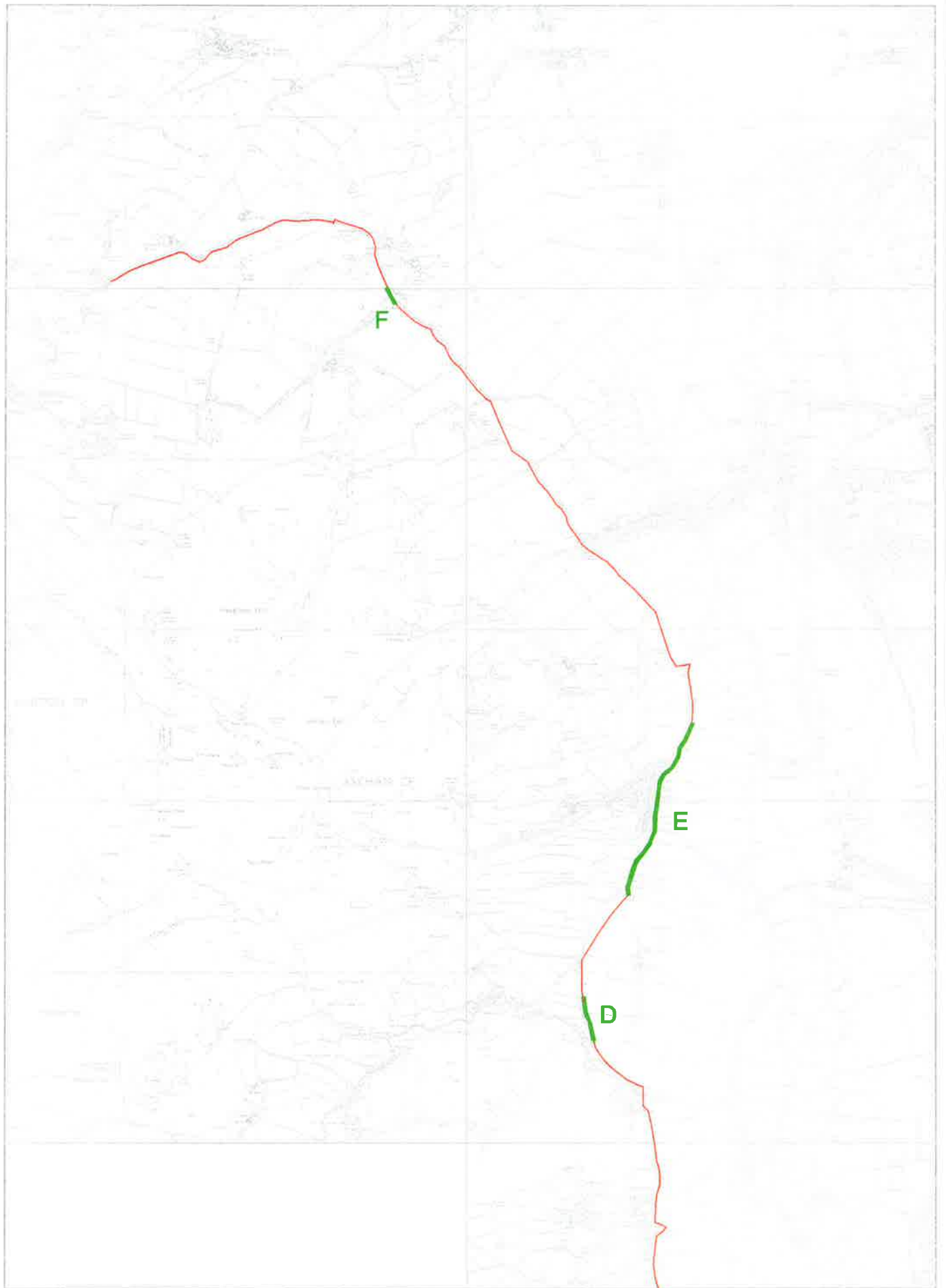
based upon the Ordnance Survey 1:50000
with the permission of the controller of HMSO
© Crown Copyright

— Area of
Recommended
Watching Brief

0 500m



Figure 15: Watching Brief Areas A,B and C



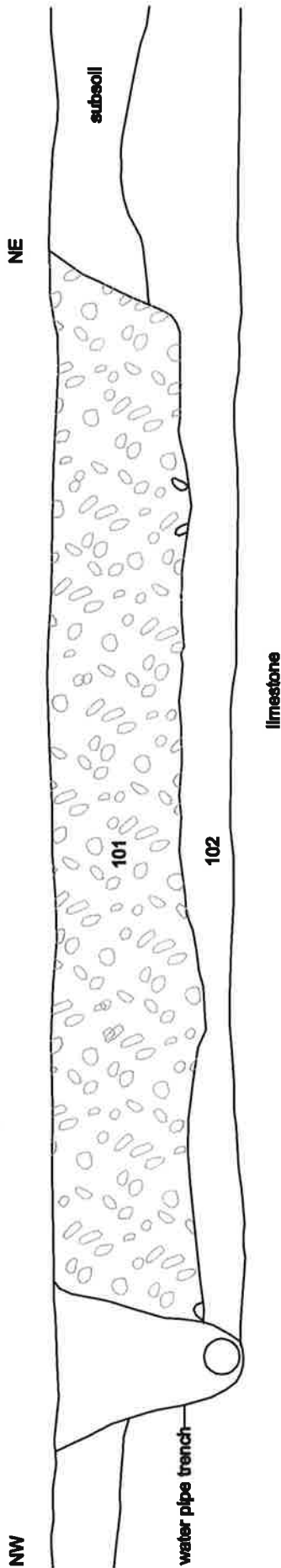
based upon the Ordnance Survey 1:50000
with the permission of the controller of HMSO
© Crown Copyright

— Area of
Recommended
Watching Brief

0 500m



Figure 16: Watching Brief Areas D, E and F



Scale 1:20



Figure 17: Section through track 101, watching brief area F



Plate 1: Possible Bank, Site 127, within Trench 32

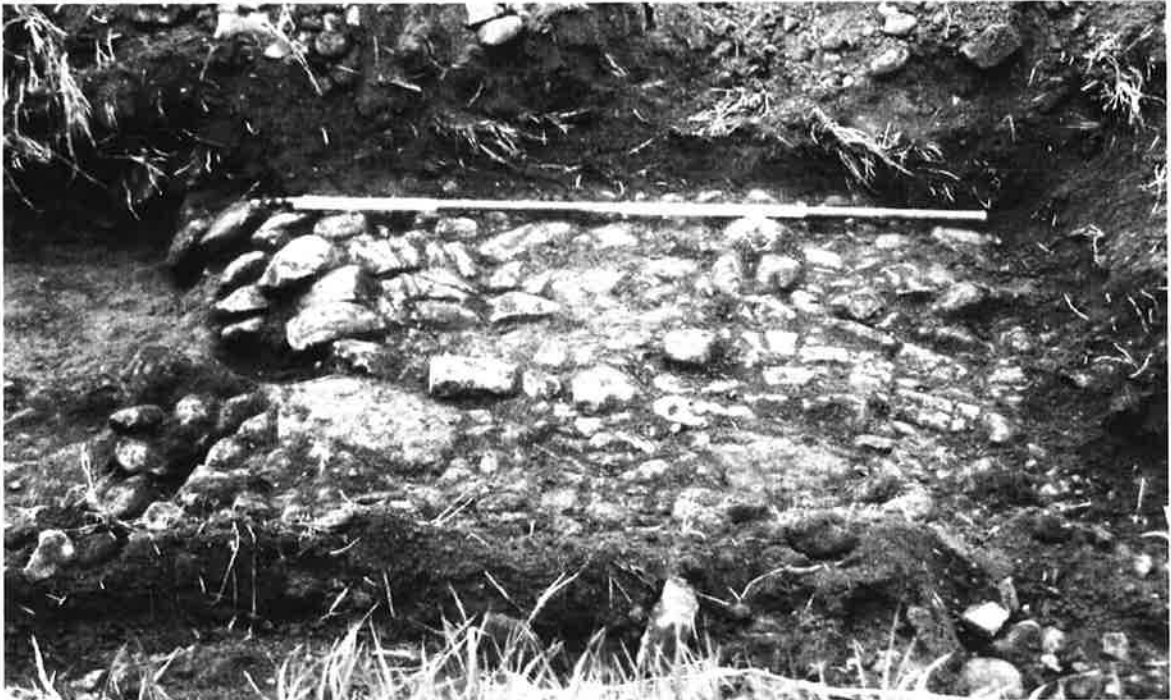


Plate 2: Cobbled Surface 2, within Trench 34



Plate 3: Cobbled Surface 4, within Trench 34



Plate 4: Linear Feature 8, within Trench 46



Plate 5: Laying of pipe in Watching Brief Area D



Plate 6: Trackway on the line of the putative Roman road in Area F



Plate 7: Excavation through trackway on the line of the putative Roman road, Area F



Plate 8: Wall 100, south of the trackway Area F



Plate 9: Typical damage to the edges of the Askham Fell Bridle Way



Plate 10: Damage to the Askham Fell Bridle way, approaching the Cockpit stone circle (AF 86)



Plate 11: Deep wheel rut damage to the Askham Fell Bridle way