# SOUTH EGREMONT PIPELINE, CUMBRIA



DESK-BASED ASSESSMENT AND WALKOVER SURVEY CP. No: 10234 DATE 11/06/2012



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Quality Assurance

This report covers works as outlined in the brief for the above-named project as issued by the relevant authority, and as outlined in the agreed programme of works. Any deviation to the programme of works has been agreed by all parties. The works have been carried out according to the guidelines set out in the Institute for Archaeologists (IfA) Standards, Policy Statements and Codes of Conduct. The report has been prepared in keeping with the guidance set out by WA Archaeology Ltd on the preparation of reports.

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### SUMMARY

Wardell Armstrong Archaeology Ltd (WA) were invited by United Utilities, to undertake a desk-based assessment and walkover survey of the South Egremont pipeline route (from NGR NY 0040 0850 to NY 0855 1531) prior to works commencing.

Bronze Age scrapers which have been found in close vicinity to the proposed pipeline route attest to prehistoric activity in the area. The pipeline also crosses what is believed to be the course of a Roman road. Later, during the 18th to 20th centuries the River Ehen became an intensive focus for industry. The proposed route affects the sites of Florence Mine, Little Mill millrace, the course of the L & NW & Furness railway, and also lies in close proximity to the site of Kinniside lead mine.

Over a 200m search area of the route three Grade II listed buildings and 29 nondesignated heritage assets were recorded. Of these the pipe route passes through the recorded extents of seven and it is possible that the pipe route also intercepts with the extents of an eighth, though it is currently outside of this assets recorded extent.

The walkover survey recorded eight additional sites along the route; a rubblestone barn, two gate-posts and five disused field boundaries. Two of the field boundaries lie across the pipe route but the significance of both these sites is very low.

Ten areas of archaeological potential were identified with further work recommended on eight. These works consist of a single watching brief (Church of St Leonard) and seven geophysical surveys along the route in the first instance (Rothersyke Farm and the southern end of the pipe route, Thornhill-Blackbeck-Calder Bridge Road, Egremont St Bees Field System, Florence Mine, Cleator Dyke, Kinniside Mine and Tithe Fields at NGR NY 01740 11720). No further work is recommended in the area of the L & NW & Furness Joint Railway and in one area no mitigation could be put forth due to unknown construction methods (Little Mill, Mill Race).

Following on from this programme of works it is likely that in some areas a phase of field evaluation will be required. The scope of which will be informed by the results of the geophysical surveys.

### ACKNOWLEDGEMENTS

Wardell Armstrong Archaeology Ltd would like to offer thanks to Louise Plant of United Utilities for commissioning this project.

Wardell Armstrong Archaeology Ltd would also like to extend their thanks to staff at United Utilities, for their help during this project.

The desk-based assessment was undertaken and the report written by Iain McIntyre, with drawings produced by Adrian Bailey. The project was managed by Frank Geicco, Project Manager for WAA Ltd, who also edited the report.

### 1 INTRODUCTION

### **1.1 CIRCUMSTANCES OF THE PROJECT**

- 1.1.1 Wardell Armstrong Archaeology Ltd (WA) were invited by United Utilities, to undertake a desk-based assessment and walkover survey of the South Egremont pipeline route (from NGR NY 0040 0850 to NY 0855 1531; **Figure 1**), prior to works commencing. The archaeological works are to be undertaken over the entire route of the proposed pipeline (which covers a distance of c.16km).
- 1.1.2 The area is known for occasional flint implements (e.g. Bronze Age scrapers CCC HER 6471 & 6472) which have been found in close vicinity to the proposed pipeline route which attest to prehistoric activity in the area. The pipeline also crosses what is believed to be the course of a Roman road (HER 1255).
- 1.1.3 Later, during the 18th to 20th centuries the River Ehen became an intensive focus for industry. The proposed route also affects the sites of Florence (CCC HER 12339) and Hardheads Mines (CCC HER 16592), Little Mill millrace (CCC HER 12328), and the course of the L & NW & Furness railway (HER 12215). It also lies in close proximity to the site of Kinniside lead mine (LD HER 16825).
- 1.1.4 As a result of this Jeremy Parsons, Historic Environment Officer, Cumbria County Council Historic Environment Service (CCCHES) and the Lake District National Park Authority (LDNPA) were consulted by United Utilities regarding this proposed pipeline. Following on from this consultation Jeremy Parsons of CCCHES requested this program of archaeological works (Parsons 2012).
- 1.1.5 The desk-based assessment comprised a search of both published and unpublished records. A search was made of records held by the Historic Environments Record (HER), held by Cumbria County Council and the Lake District National Park Authority, and local libraries in the vicinity, holding local historical information, as well as a search of the archives and library held by WA Archaeology Ltd.
- 1.1.6 The walkover survey aimed to identify any previously unrecorded surface archaeological features and to make an assessment of the condition of individual historic features.
- 1.1.7 The objective of this scheme of works was to undertake work in order to identify and characterise the archaeological constraints associated with the development area. This report sets out the results of the work in the form of a document outlining the findings, followed by a statement of the archaeological potential of the area.

### 2 METHODOLOGY

### 2.1 **PROJECT DESIGN**

- 2.1.1 Wardell Armstrong Archaeology Ltd (WA) was commissioned by United Utilities to undertake a desk-based assessment and walkover survey of the entire pipeline route (from NGR NY 0040 0850 to NY 0855 1531). All work undertaken was consistent with the relevant standards and procedures of the Institute for Archaeologists, as set out in Standards and Guidance For Archaeological Desk-Based Assessments (IfA 2011) and generally accepted best practice.
- 2.1.2 A Project Design (Geicco 2012) was produced by Wardell Armstrong Archaeology Ltd prior to works taking place, and was approved by Jeremy Parsons, Historic Environment Officer, Cumbria County Council Historic Environment Service (CCCHES) and the Lake District National Park Authority (LDNPA).

### **2.2 DEFINITIONS OF TERMS**

2.2.1 For the purposes of these investigations, the term 'route' is used to refer to the area of the proposed development. The term 'search area' relates to the wider area defined for the purposes of baseline information collection. For the purpose of this assessment, a search area of 200 metres beyond the route boundary was been defined in order to allow for the study of the wider area and to set the route into context.

### 2.3 NATIONAL AND LOCAL PLANNING POLICY AND GUIDANCE

- 2.3.1 Statutory designations comprise scheduled monuments, protected wrecks, listed buildings and conservation areas. In addition to the national and local planning policy, presented below, the Ancient Monuments and Archaeological Areas Act (1979) provides protection for scheduled monuments. Likewise, applications affecting listed buildings and conservation areas are considered in respect to the Town and Country Planning (Listed Building and Conservation Areas) Act (1990).
- 2.3.2 Non-statutory designations, comprising registered parks and gardens and registered battlefields, are assessed under national and local planning policy only. This is also the case for the remainder of the archaeological resource. These are non- statutory designations and comprise entries onto a Historic Environment or Sites and Monument Record as well as previously unknown features which may be recorded as part of a desk based assessment or environmental impact assessment.

### 2.4 NATIONAL POLICY

- 2.4.1 Within the National Planning Policy Framework (NPPF 2012) all statutory designated, non-statutory designated and non-designated archaeological and cultural features are classified as 'heritage assets'.
- 2.4.2 One of the documents core planning principles is to:

"Conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations." (NPPF 2012, Para. 17, point 10).

2.4.3 Within Section 11 there is specific mention to National Parks:

"The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight..." (NPPF 2012, Para. 115).

2.4.4 With regard to Section 12 (Conserving and enhancing the historic environment) it should be recognised that:

"heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance." (NPPF 2012, Para. 126).

2.4.5 To this end when:

"determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation." (NPPF 2012, Para. 128).

- 2.5 LOCAL POLICY
- 2.5.1 The route lies partially within two local authorities, Copeland District Council and the LDNPA.
- 2.5.2 Planning policies in place for Copeland District Council do not expand on those in the NPPF.
- 2.5.3 The Local Development Framework for the LDNPA (2010) expands upon statements made in Sections 11 and 12 of the NPPF:

"When considering development proposals that affect archaeological assets, we will generally preserve assets in situ. On sites of potential archaeological interest, we may require the developer to carry out an archaeological field evaluation before assessing an application. Where we allow development, we may include conditions to record, protect or rescue the site." (LDNPA 2010, Para.4.60.3).

### 2.6 THE DESK-BASED ASSESSMENT

- 2.6.1 In order to inform this assessment baseline data was obtained from the following:
  - Cumbria County Council Historic Environment Record and Lake District National Park Historic Environment Records (HER);
  - Cumbria Record Office at Kendal and Whitehaven Record Office;
  - the National Heritage List for England datasets of designations (English Heritage 2012):
    - Scheduled Monuments;
    - Listed Buildings;
    - Registered Parks and Gardens;
    - Registered Battlefields;
  - aerial photographic evidence;
  - the archive of the Cumbria Amenity Trust Mining History Society (CATMHS);
  - the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society;
  - unpublished grey literature;
  - cartographic information;
  - available geotechnical data (e.g. boreholes and test pits).
- 2.6.2 A gazetteer of archaeological sites investigated can be found in **Appendix 1.1** with reference to **Figures 2** and **3**.

### 2.7 THE WALKOVER SURVEY

- 2.7.1 A walkover survey was undertaken of the proposed route to the requirements of a Level 1 Survey, as described by English Heritage (2007). A level 1 survey represents the minimum standard of recording and is designed to record the existence, location and extent of previously unknown sites. The emphasis for the recording is on the written description.
- 2.7.2 The walkover included an assessment of the topography of the area and aimed to identify potential archaeological sites not known through the Cumbria County Council and Lake District National Park Historic Environment

Records, as well as assessing areas of archaeological potential. It further determined any constraints to archaeological site survival.

- 2.7.3 Any visible earthworks, archaeological remains or historic features were recorded by the walkover survey using WA proforma for field surveying.
- 2.7.4 This included:
  - asset type;
  - location data (8 figure national grid reference);
  - present land use and owner;
  - key sources, and:
  - asset description (form, dimensions, extent).
- 2.7.5 A gazetteer of sites identified can be found in **Appendix 1.2** with reference to **Figures 2** and **3**.

#### 2.8 THE ARCHIVE

- 2.8.1 Two bound copies of the final report will be sent to the CCCHES and a further two to the LDNPA. A digital copy of the report (in pdf format) will also be made available to both where viewing will be available on request.
- 2.8.2 Wardell Armstrong Archaeology Ltd and Tees Archaeology support the Online AccesS to the Index of archaeological investigationS (OASIS) project. This project aims to provide an online index and access to the extensive and expanding body of grey literature created as a result of developer-funded archaeological fieldwork. As a result, details of the results of this study will be made available by Wardell Armstrong Archaeology Ltd, as a part of this national project. This project has the unique identifier of wardella2-128144.

### **3** BASELINE INFORMATION

### 3.1 TOPOGRAPHICAL AND GEOLOGICAL CONTEXT

- 3.1.1 The entire route sits off the edge of the western fells of the Lake District, Cumbria. Two local high points include Grike (488m Above Ordnance Datum; AOD) and Lank Rigg (541m AOD). This topography, in turn with Ennerdale water to the east of the start point, dominate the local watershed; the route running parallel to the east of the River Ehen until south of Egremont. When the route crosses the Ehen it enters the West Cumberland Plains an area of lower lying less undulating topography. From its start point the route follows the 120m AOD contour until the east of Cleator Moor where it meets Blackhow Wood descending to 100m AOD to following the woods western boundary. As it progresses south it continues to drop to 50m AOD east of Egremont before skirting around the south of the town and over the River Ehen at 40m AOD, finishing at Gulley Flatts, Egremont at 60m AOD. The route runs primarily through enclosed pasture but along its route crosses four unclassified roads and the A595 (T) southeast of Egremont.
- 3.1.2 Soils consist of mainly freely draining slightly acid loamy soils (Wick 1 Association). East of Cleator and Cleator Moor a small patch of slowly permeable seasonally wet acid loamy and clayey soils is evident associated with Blackhow Wood, while south of Egremont toward Nethertown and Beckermet freely draining slightly acid sandy soils (Newport 1 Association) are present (SSEW 2012).
- 3.1.3 From Ennerdale Water to Egremont the bedrock geology consists of mudstone and sandstone of the Buttermere Formation, formed approximately 470 to 495 million years ago in the Ordovician Period. From Egremont to the south the bedrock is of the younger St Bees Sandstone Formation formed approximately 242 to 248 million years ago in the Triassic Period (BGS 2012).
- 3.1.4 Due to the topography, hydrology and geological history of western Cumbria the superficial geology is generally chaotic. All have been formed within the last 2 million years (Quaternary Period) with the majority being formed after the last glacial maximum (c.20, 000 years ago). The majority of the land is covered by Devensian Cold Stage (c.50 20, 000 years ago) diamicton glacial till, non-sorted to poorly sorted sands or larger size particles, suspended in a mud matrix. At the base of Grike alluvial fan deposits of sands and gravels are seen. Along the pipe route from east of Cleator Moor to Thornhill patches of glaciofluvial (melt water) sands and gravels of Devensian age are recorded. Where the River Ehen becomes more substantial alluvial (flood plain) deposits of clay, silts, sands and gravels are evident and south of Thornhill fluvial (river terrace) sediments are recorded.

### 3.2 DESIGNATED AND NON-DESIGNATED HERITAGE ASSETS

- 3.2.1 The Cumbria County Council (CCC) and Lake District National Park Authority (LDNPA) Historic Environment Records were consulted for nondesignated entries and designated heritage assets including World Heritage Sites, Scheduled Monuments, Listed Buildings (Grade I, Grade II\*, Grade II), Registered Parks and Gardens and Registered Battlefields within a search area of 200 meters from the route boundary. Besides identifying heritage assets that may be directly or indirectly affected by the proposed solar farm this search boundary was expected to provide sufficient data to represent the archaeological character of the area.
- 3.2.2 From these consultations it was established that there are **32** heritage assets that wholly or partially lie within the search area. Further sites outside the search area where investigated to reveal a fuller picture of the historic development of the landscape the route traverses and to inform likely archaeological potential. Each was given a unique identifier reference (i.e. **1** or **34**) and is detailed in **Appendix 1.1** with reference to **Figures 2** and **3**.
- 3.2.3 Scheduled Monuments. There are no scheduled monuments along the route neither are there any within the search area. Site 43 and 49 though being 3km east and 2km south of the route, respectively, merit discussion (see Sections 3.5 and 5).
- 3.2.4 *Listed Buildings.* There are no listed buildings along the route but three are recorded within the search area (Sites **16**, **17**, **19**).
- 3.2.5 *Conservation Areas.* The route does not pass through any Conservation Areas and there are no Conservation Areas within the search area.
- 3.2.6 *Registered Parks and Gardens.* The route does not pass through any Registered Parks and Gardens and there are none within the search area.
- 3.2.7 *Registered Battlefields.* The route does not pass through any Registered Battlefield and there are none within the search area.
- 3.2.8 *Known Non-Designated Heritage Assets.* There are **29** non-designated heritage assets within the search area. Of these the pipe route passes through the recorded extents of seven (Sites **5**, **9**, **21**, **27**, **30**, **31**, **33**). It is possible that the pipe route also intercepts with the extents of Site **38**, though it is currently outside of this assets recorded extent. These and all other assets are described in **Section 3.5** and discussed with respect to impact in **Section 5**.

#### **3.3 PREVIOUS INTERVENTIONS**

- 3.3.1 Excavations at Gulley Flats, Egremont (Site 7; Neil 1993), revealed evidence of boundary ditches, land drains and building platforms. All features were attributed to medieval Egremont.
- 3.3.2 In 1994 further trial trenching occurred at Queen's Drive, Egremont, 200m north of the route (Site **6**; LUAU 1994). No significant remains were encountered.
- 3.3.3 The Ennerdale landscape survey (Site 54; Quartermaine 2003) presents the results of a management assessment survey of land in Ennerdale in 2003 and three previous seasons of survey between 1995 and 1997. It examined the historical development of exploitation of the valley from its earliest origins through to the present. The area of this survey covers the most eastern end of the route and search area. Reference to this work is made below (Section 3.5).
- 3.3.4 The Gulley Flats and Queen's Drive sites can be utilised to aid in the modelling of the potential depths of any archaeological remains.

### 3.4 HISTORIC LANDSCAPE CHARACTERISATION

- 3.4.1 **Figure 4** shows the Historic Landscape Characterisation (HLC) for the site. HLC captures varying evidence for change and early landscapes within the present land through the identification of extents of landscapes with similar or distinguishing boundaries. These extents are then mapped across an area (in this case the county of Cumbria) forming a patchwork of units of various HLC types. HLC units of any given type share distinctive character today based on historic process common to that type and therefore tend to contain a predictable range of archaeological sites and historic features. It should be noted that though units appear on the map as distinct boundaries, landscapes do not function in such a way, with change being along a continuum as opposed to strict delineation.
- 3.4.2 The following summaries have been made with reference to Cumbria County Council (2009), Newman and Hardie (2007) and Conway (2011), and with consultation of the HLC via the CCC and LDNPA Historic Environment Records. Character areas described below, and their boundaries, are the same as those used in the above reports, but concentrate specifically on the line of the route and the search area.
- 3.4.3 *Ennerdale*. The southern part of this character area comprises Ennerdale Water and its valley. The route and search area occur within the western 1 km. This part of the route is characterised by ancient (mainly medieval in origin) with later planned (from the late 18th Century) enclosure, consisting of irregular

stone-walled enclosures. But the majority of the land lying within the search area is classified as woodland plantation.

- 3.4.4 *Western Fell Edge.* The Western Fell Edge is a small area on the lower slopes below the Central Fells, to the east of Egremont and Cleator Moor. It comprises mostly lower fells, dominated by intakes and ancient enclosures which probably represent late medieval assarts. Dispersed settlements include a number of 'thwaite' names, such as Sillathwaite, indicating that they were established from clearings in the common waste. Dispersed farms spread along the south side of the River Ehen, at the base of Ennerdale, may be indicative of their older origins. Field boundaries are mainly hedgerows, with stone walls restricted to the intakes, and around the edges of 'thwaite' farms. The landscape still readily exhibits elements of medieval origin.
- 3.4.5 Along the route ancient enclosed lands dominate between the River Ehen and the lower fells. The lower fells themselves classified as planned enclosure. A single pocket of former common arable land is described to the northeast of Egremont and several small pockets of plantation exist along to the west within the search area. East of Egremont mining in the form of Florence and Hardhead workings is evident.
- 3.4.6 *West Cumberland Plain.* Developments have largely obscured the planned, medieval, nucleated settlements that predominated until the 19th century. While in-land, former coal mining characterises much of the industrial nature of the area.
- 3.4.7 Past field patterns have been much disrupted by modern developments, including land restorations, for which the modern field pattern bears very little relationship to the historic pattern. In the Copeland District there are relatively few former common arable fields and the fieldscape is dominated by ancient enclosures. These distinctions, however, are subsumed under the general urban and industrial character of the area.
- 3.4.8 The small strip of the route that passes through this area is primarily characterised as planned enclosure of medieval origin. A small area of woodland plantation occurs at the very southern tip of the route and any ancient enclosure is obscured by the modern A 595 (T).
- 3.4.9 *St Bees.* This character area is distinguished from the neighbouring areas by a comparative lack of modern and industrial influenced development. The settlement pattern is a mix of nucleated and discrete settlements, with the nucleated settlements pre-dating 1770, exhibiting clear evidence of medieval planning. The discrete settlements are often situated within areas of planned enclosure and half of these date to after 1770, indicating that enclosure of the open wastes from the late 18th century onwards led to the development of new settlements.

3.4.10 The field pattern is a mix of former common arable field, ancient enclosures and planned enclosure; two-thirds of the route within this area pass through land characterised as ancient enclosure. In each case the boundary is usually formed by a hedgerow. The remainder, to the east, consists of blocks of (long since removed) plantation woodland, associated with Site **10**.

### 3.5 HISTORICAL BACKGROUND AND SITE DEVELOPMENT

- 3.5.1 *Prehistoric and palenological evidence (up to c.1st Century AD).* The West Cumbrian coastal plain was a focus of late Mesolithic to early Neolithic (c.6000BP<sup>1</sup>) activity (Hodgkinson *et al* 2000), including at St Bees (knives, scrappers, arrowheads; Cherry and Cherry 1973) and Drigg (cores, scrappers, rejuvenation flakes, microliths; Nickson and Macdonald 1955).
- 3.5.2 Draining of Ehenside Tarn (Site 4) in 1869 and excavations in 1871 lead to the discovery of a dwelling site including stone axes of Great Langdale origin. The site is dated at its earliest from 5350 to 4700BP, but later phases of occupation are suggested. Modern field walking over the site identified waste flint, scrappers and burnt blades (Hodgkinson *et al* 2000).
- 3.5.3 Pollen diagrams from sediment profiles at EhensideTarn, to the south of the route, show forest clearance episode from before the Elm decline (c.4800 BP) but without any pronounced expansion in grasses or any record of cereal pollen until, tentatively, c. 4300-4100BP (Pennington 1970 cited in Hodgkinson *et al* 2000, 68). Taken together with other sediment samples from the coastal area, these dates indicate that the West Cumbrian coastal plain was one of the earliest regions in the country to be permanently cleared (Bell and Walker 2005, 165).
- 3.5.4 To the east of the route part of a pollen diagram for Ennerdale Water, extends from the Elm Decline to c.3800bp (uncalibrated date). At the start of the period, the vegetation was predominantly arboreal, comprising mainly birch, oak and a slight majority of alder. Significantly there were only very few grasses, but substantial amounts of ferns. A steady decline in forestry is evident beyond this with a temporary clearance of oak woods (from c.4800BP to c.4300BP) which matches a corresponding increase in grasses, and was potentially a product of human influence on the landscape (Pennington 1975, 81).
- 3.5.5 Though not within the search area the cairns and enclosed settlement on the River Calder (Site **49**) and field system and settlement at Tongue How (Site **43**) are a visible reminder of Bronze Age activities on the landscape (c.4100-2600BP). Spot finds attributed to the same period, near the southern end of the

<sup>&</sup>lt;sup>1</sup> BP, years before present. Used to refer to dates obtained from the radiocarbon method; the "present" is 1950. AD, Anno Domini is our present calendar system, i.e. 2012AD.

route, include surface collections of flints, scrappers and cores (Site 1) and flakes (Site 2).

- 3.5.6 Undated but potentially prehistoric assets include a stone axe from Blakeley Moss (Site **41**).
- 3.5.7 *Romano British (c.1st Century AD 5th Century AD)*. Significant advances to the conquest of Britain, including Cumbria, where made during the governorship of Agricola (c.77-83/4AD). Control of the land and its inhabitants (de la Bédoyère 2000, 9) is behind the construction of Hadrian's Wall (started c.122AD) and the Roman road network seen across Cumbria.
- 3.5.8 A suspected Roman road from South Egremont to Thornhill, Blackbeck and Calder Bridge (Sites **21** and **22**) means it crosses the pipeline route, somewhere in the vicinity of the route crossing the present A595 (T). The evidence is based on personal accounts from the 1950s and 1960s and the precision of the locations is unknown.
- 3.5.9 Further, domestic, Roman settlement is recorded at Tongue How (Site 43).
- 3.5.10 *Early Medieval and Place-Name Evidence (5th mid-11th Century AD).* The post-Roman period to the Norman conquest is internally diverse in terms of chronology, with the 5th and 6th centuries (Sub-Roman, Dark Ages, Early Anglo-Saxon) looking very different from the 7th to early 9th centuries (Middle Anglo-Saxon) and the late 9th to mid-11th centuries (Late Anglo-Saxon or Viking period).
- 3.5.11 Within the search area no sites of certain early medieval date were identified. The investigation of place-name evidence indicates a likelihood of Scandinavian, and possibly Anglo-Saxon, settlements (**Table 1**).

Place-name	Elements	Ref
	Anund's. (Old Norse) Personal name;	
	dalr (Old Norse) A valley;	Armstrong <i>et al</i> 1950, 385;
Ennerdale	hēafod (Old English) A head; an end or	Mills 1998, 179;
	source; headland in a field-system; a	Watts <i>et al</i> 2011, 217;
	projecting piece of ground; a hill (often small)	
Wath	<b>vað</b> (Old Norse) A ford	Watts 2011, 656
	clāte (Old English) Burdock, goose-grass;	Armstrong et al 1950, 357;
Cleator	erg (Old Norse) A shieling, a hill-pasture; a	Ekwall 1960, 110;
	summer-pasture camp, a dairy or grazing	Mills 1998, 119;
	out-station	Watts <i>et al</i> 2011, 142;
Egremont	aigre (Old French) Pointed;	Armstrong et al 1950, 379;
	egre Latinised form of Ehen/ Anund, see	Ekwall 1960, 162;
	above;	Mills 1998, 174;
	mont (Old French) Hill, mountain	Watts <i>et al</i> 2011, 211

	Table 1.	Place-name	Evidence
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- 3.5.12 The Norse components of many of the place-names suggest origins in the latter part of the early medieval period or whilst a Scandinavian language was still commonly spoken in the area. The later English and French elements do not rule out earlier settlement origins, just that latter linguistic forces (i.e. the Norman Conquest) exerted a greater influence.
- 3.5.13 The Barony of Copeland, of which Egremont was the *caput* (administrative centre) from the 12th century, is suggested to be based on an earlier territorial unit with origins many centuries before the Norman Conquest (Winchester, 1979).
- 3.5.14 *Medieval (mid-11th 16th Century AD).* The *Domesday Book* is not available as a source of historic information for northern Cumbria; instead the *Register of St Bees* is the earliest source available.
- 3.5.15 The early history of Copeland is poorly documented. Collingwood considered the name 'Copeland' to mean 'bought land' (Fair 1937, 72); this alludes to it having been purchased from William I by Gospatric in c.1070, as part of the Earldom of Northumberland (Fair 1937, 72-4). The Victoria County History of Cumberland records that the area of Copeland was given to William de Meschines by William I (Wilson 1901, 297). Ketel (father-in-law of Gospatric's daughter Gunhilda) seems to have had an uncertain place in this tenure. Ketel's nephew, William de Lancaster I, may have held the Barony of Egremont for a short time under King Stephen, in c.1140 (Quartermaine 2003).
- 3.5.16 At the time of Domesday, Copeland seems to have been considered administratively as a part of Yorkshire (Fair 1937, 82).
- 3.5.17 The formation of the urban community of Egremont is closely associated with the Norman feudal seat of power established at Egremont. Egremont Castle was founded by c.1125 and a large area of land to the south of Egremont to which a Deer Park is ascribed (Site **10**; **Figure 4** see also **Section 3.4.10**) may originate from this period. Grants of land and privileges to a community of burgesses by Richard de Lucy, Lord of the Barony of Copeland in c.1200, set the origins of the town back to the end of the 12th century (CCC and English Heritage 2000).
- 3.5.18 The evidence for agricultural use is visible within the search area as the remains of Egremont town fields are very visible in the present field boundaries (Site **27**).
- 3.5.19 Though the present church of St Leonard (Site **16**) was rebuilt in 1841 the chancel is 12th century.
- 3.5.20 By 1578, two thirds of the town had passed to the Earl of Northumberland and within the survey of the Earl's estates the description of the town appears to coincide closely with the patterns of streets shown on the first edition OS map

of the town. However, the total number of burgages in 1578 (101) is considerably smaller than that given in the 1334 (138). It is possible that Egremont suffered shrinkage as a result of the deterioration in climate, crossborder raids and the maintenance of retinues by the nobility and high demands from the Crown, famine and sheep diseases, all of which occurred by the mid-14th century (CCC and English Heritage 2000, Jones 2004). Such decline me be the reason for abandonment of other settlements within Copeland, such as seen at Salter deserted medieval village (Site **40**).

- 3.5.21 Though mining has a major impact on the landscape within the post-medieval period no sites of mineral extraction are known within the search area. Indirect evidence for mining of iron slag from a bloomery site does exist outside the search area (Site **57**).
- 3.5.22 *Post-Medieval (16th Century AD Present)*. The dissolution of the monasteries (1536-1541) marks the start point of the post-Medieval period. From c.1540 there was a step-change in the rate of exploitation of natural resources leading to radical changes to the landscape.
- 3.5.23 The landscape around the search area was undoubtedly an active centre of iron working and mining with numerous sites on Crag Fell and Revelin Crag (Sites 44, 50, 55, 59 and 64) on the south side of Ennerdale Water. It is believed that the area has been worked, intermittently, over a period of several hundred years but among all the known workings only one is pre-1860 that being Old Crag Fell Mine (Site 65). Associated remains of dams (Site 58), kilns (Site 45) and bloomeries (Site 56) are also found, as are the remains of the dwellings of those who worked within the industry (Sites 51-53, 62 and 63).
- 3.5.24 Within the search area disused mine workings are identified outside of Egremont (Sites **25** and **26**) near Florence Mine (Site **30**). The largest disused mining complex can be found at Kinniside Lead Mine (Site **38**).
- 3.5.25 In use in 1829, the mine was described as one of the 3 most productive in the district. In 1873 it has been suggested that Kinniside had been worked for at least 100 years but very little is known about this early mining period.
- 3.5.26 Within the search area the Florence (Site **30**) and Ullcoats (Site **34**) Mines (combined in 1960) are still in use though at present mining is only temporarily suspended (Finlinson, Egremont Mining Company *pers. comm.*). Extracted ore was originally used in the production of pig iron that was then made into steel. As technology progressed the iron ore began to be used to extract carbon from castings, and in the manufacture of pigments for paint and cosmetics. At the beginning of the 20th century prospecting interest was spreading to the area south of Egremont with the Millom and Askam Hematite Iron Company sinking a shaft at Ullbank near Beckermet (CCC and English Heritage 2000).

- 3.5.27 Close to the river Ehen, milling was also an important part of the industrial development of the area; the first edition Ordnance Survey (1865a) mark a total of seven water mills alone on the banks of the Ehen in the immediate vicinity of Egremont. Paper (Site 13), corn (Sites 18, 23, 28, 35 and 47), flax (32) and mills associated with iron foundries (Site 8) are known from within the search area. Disused mill-races can still be identified within the search area (Site 31).
- 3.5.28 The railways came early to West Cumberland spurred on by the need to transport extracted minerals and products to their final markets.
- 3.5.29 By 1847 the Whitehaven Junction Railway (WJR) had stretched the line of rails south along the coast to Whitehaven. Extending the system southwards, the Whitehaven & Furness Junction Railway (W&FJR) made a connection through to the Furness at Broughton in 1850.
- 3.5.30 From these coastal routes, developments took rails inland. The Whitehaven Cleator & Egremont Railway (WC&ER) reached Egremont by July 1857 at the same time as it was taken past the existing ironworks at Cleator Moor to Frizington. By 1866 the WC&ER had extended north to join the Cockermouth & Workington lines, at which point the giant London & North Western Railways (LNWR), based at Euston, stepped in and took it over. The line that crosses the route (Site 9) was built south from Egremont to Sellafield in 1869 (The Cumbrian Railways Association 2012).
- 3.5.31 By 1880 the peak prosperity of West Cumberland was already past and in 1923 all the local railways became part of the London Midland & Scottish Railway. Egremont station closed to passengers in January 1935 and by 1973 only a single line for goods traffic from Whitehaven to Egremont remained in use for the local iron ore traffic.
- 3.5.32 *Cartographic Evidence.* Saxton's (1576) and Speed's (1610) maps both show Egremond (Egremont) and Enerdale (Ennerdale) and Morden's map (1695) introduces Cleator. Amusingly on all three Enerdale and Cleator are placed on the south/eastern side of the river. Hodskinson and Donald's Map of Cumberland (1774) is to a much greater scale of detail and the modern spelling of place-names is in use (as is their location).
- 3.5.33 The Tithe maps and apportionments (produced from 1838 to 1845) are the first available accounts of the specific size and land use of the route (**Table 2**; **Appendix 2**).

Field Use	No.	%
Arable	107	78.68
Meadow	12	8.82
Pasture	5	3.68
Wood	2	1.47
Unknown	10	7.35
Totals	136	100

Table 2. Summary of Tithe Map and Apportionment Data

- 3.5.34 The majority of the parcels being described as arable are the complete opposite of the present day land use where most of the search area is used as pasture and no structures were recorded within the boundaries of any of the parcels of land.
- 3.5.35 Field 88 (Far Hoghouse Close) within St Bees (Ennerdale) parish is described as primarily wood. Though the name does not suggest it, such a woodland may be associated with kiln or bloomery workings based on its location away from populations and close to water, factors for the sitting of such industries as described by Davies-Shiel (2003).
- 3.5.36 Fields 269 (High Kiln How) and 270 (Low Kiln How) in Cleator parish and fields 204 (Kiln Close) and 204a (Kiln Close Plantation) in St John Beckermet (Briscoe) parish all share the "kiln" element to their names. This is suggestive of such being close by or maybe being present on the land (**Plate 1**).
- 3.5.37 Further, within St John Beckermet (Briscoe) parish three parcels (224-226) share the name Colebank close. The *cole* element to the name has three possible origins: *Col*, Old English for coal especially charcoal (Watts *et al* 2011, 150); *coll*, Old English for Hill (Mills 1998, 92), or; *Koli*, an Old Norse personal name (Watts *et al* 2011, 150). No other references to the name Koli are known in the area nor do the fields occupy part of any hill, so given the nature of the mineral extraction industries in the area, and the fact that these three parcels are directly to the north of field 204 (Kiln Close), it is possible that the name is more closely associated with the coal or charcoal origin. This suggests such activities were prominent on these parcels.
- 3.5.38 By the First Edition Ordnance Survey (1861, 1865a-h) little has changed. Egremont, Cleator and Cleator Moor have expanded but along the route, the only field boundary changes have occurred south of Egremont, and this being field amalgamation. Kinniside Mine (Site **38**) is shown as in use (Ordnance Survey 1965c), the field containing Cleator Moor Dyke (Site **33**; see **Section 3.6**)

is recorded as devoid of earthworks (Ordnance Survey 1965f) and the Roman road (Sites **21** and **22**) is not shown (Ordnance Survey 1865h).

- 3.5.39 By the publication of the Second Edition Ordnance Survey (1899c) Kinninside mine has fallen in to disuse (Plate 2) and Ullcoats Mine has come in to use (Site 34). More importantly, and with a bigger impact on the landscape and economic development of the region, the railways have reached Egremont (Site 9; Ordnance Survey 1899h; Plates 3 and 4) and Cleator.
- 3.5.40 Though Hardheads Mine (Site **25**) is also evident on the Second Edition Ordnance Survey (Ordnance Survey 1899h) by the Third Edition (1926d) it has been dwarfed by Ullcoats Mine and the newer Florence Mine (Site **30**).
- 3.5.41 Despite the change in landscape brought about by the railways and mining, the eastern aspect of the route and search area remain relatively unchanged throughout the earliest Ordnance Survey Editions. By the end of the 1950s the Lake District National Park had been established.
- 3.5.42 The inter-war period (1918-1939) and the post-war period (1950s onward) saw mining continue to decline in West Cumbria and with it their structures from the landscape and the towns they supported. It is during this time that Florence and Ullcoats Mines contract in size. By 1988 at the latest the line of rail-track within the search area had been removed and in 1990 the Egremont bypass, A595, was opened.

### **3.6 AERIAL PHOTOGRAPHIC EVIDENCE**

3.6.1 All available aerial photographs from both Cumbria County Council Historic Environment Record and the Lake District National Park Historic Environment Records (HER) were viewed for potential sites. All photographs covering the search area had been analysed in the past and new sites added to the relevant HER. The most notable of which being an earthwork ditch and embankment (Site **33**) known as the Cleator Moor Dyke for which no date is ascribed (**Plate 5**). No new sites were identified during these investigations

### 4 WALKOVER SURVEY

#### 4.1 INTRODUCTION

- 4.1.1 The walkover survey of the route was undertaken on the 24th and 25th May 2012.
- 4.1.2 The known assets along the pipe route were investigated to ascertain what visibly remained and to look at the present land-use with respect to predicting what may survive below. Specific topology and geology were also noted.
- 4.1.3 Any visible earthworks, archaeological remains or historic features were recorded by the survey, being given a unique two number identifier reference (i.e. **66**). A gazetteer of results can be found in **Appendix 1.2** with reference to **Figures 2** and **3**.
- 4.2 **RESULTS**
- 4.2.1 General topographic and geological data can be found in **Section 3.1**.
- 4.2.2 In contrast to the tithe data, outside of the road and river crossings, the route passes entirely through land presently used as pasture. No signs of ploughing within the last five years were obvious.
- 4.2.3 The boundaries between fields and roads are in many cases irregular stone walling. In some cases these wall are being left to decay. In some cases large tress and partial hedges have grown through (**Plate 6**).
- 4.2.4 The route itself crosses numerous white roads and lanes, five unclassified and two B-class roads, and the A 595. As well as the River Ehen the route crosses the Rowland and Oxenstone Becks, the Mere Beck, Sunton Sike and the Black Beck, as well as a myriad of minor streams.
- 4.2.5 Stream-bank erosion near Ennerdale Bridge (at NY 07370 15225) showed a very thin topsoil (c.0.2m) of slightly acid loamy soils (Wick 1 Association) over an intermixed silt, course sand and cobble layer of a colluvial nature (at least 0.3m thick; **Plate 7**). Near Bracken Wreay House (at NY 06160 15425) drainage works showed a similar topsoil of a similar thickness over a light brown clay sand (c.0.1m thick) which in turn overlaid a rich dark peat-like layer with extensive small remains of branches and wood (at least 0.2m thick; **Plate 8**)
- 4.2.6 The known assets that might be impacted by the pipe route were specifically investigated (**Figure 5**).
- 4.2.7 *Rothersyke Farm, Lowside* (*Site 5*). Identified from the First Edition Ordnance Survey (1861) as a farmstead the walkover recorded no features along the line of the pipe route. The present land-use was pasture.

- 4.2.8 *L* & *NW* & *Furness Joint Railway* (*Site* 9). Finally dismantled by 1988 at the latest, the embankments and cuttings are still visible across the pipe route. The area of a junction is still visible (**Plate** 9). There is no surface evidence for any associated structures.
- 4.2.9 *Church of St Leonard (Site 16).* The pipe route runs along the lane to the north of the church. The area between the church and the lane is consecrated ground. No features where observed.
- 4.2.10 *Thornhill-Blackbeck-Calder Bridge Road (Site 21).* The exact course of the road is unknown but the extent recorded by the CCCHER follows the unclassified road to the east of the modern A595. If this is the case then the area where the pipe route and Roman road intersect may be relatively un-truncated. Nothing was visible on the surface.
- 4.2.11 *Egremont, St Bees Field System* (*Site* 27). Remains of Egremont town fields are very visible in the present field boundaries when seen from NY015097 (1.3km south). Nothing was visible on the surface during the walkover survey.
- 4.2.12 *Florence Mine (Site* **30**). First shown on the Third Edition Ordnance Survey (1929d) the mine reaches its maximum extent c.1960 when it joins Ullcoats Mine (Site 34). Much of the mine is no more with a single winding engine (**Plate 10**) and a small block of buildings (now a heritage centre) to the northwest. The pipe route passes along a lane to the northwest of the site with origins before the mine. No mining structures were observed in the fields to the northwest. The pipe route though does pass through a railway branch line from the mine.
- 4.2.13 *Little Mill, Mill Race (Site 31).* This mill race used to run from Little Mill (Site 23) to a now disused reservoir. It then supplied Ullcoats mill (Site 34). It still exists in the landscape as a small stream up until Florence Mine.
- 4.2.14 *Cleator Dyke (Site* **33**). Identified through aerial photography in 1989, modern satellite imagery shows signs of a surviving feature to the east of the parcel. Nothing is visible on the ground.
- 4.2.15 *Kinniside Mine (Site 38).* The maximum extent of the area of Kinniside Mine comes within 100m of the pipe route. The walk over survey saw nothing beyond the levels that typify its northwest boundary.
- 4.2.16 *Tithe Fields Woodlands (Field numbers* 204 224-226). The northern fields (224-226; also see Plate 1) where in use as pasture at the time of the walkover and no surface remains were visible. The Southern field (204) had been left to go to waste and scrub and was considerably more wet underfoot than the other three perhaps indicating its wooded past and subsequent felling.

- 4.2.17 The walkover survey recorded eight additional sites along the route. A rubblestone barn (Site 66), two gate-posts (Sites 67 and 69) and five disused field boundaries (Sites 68, 70-73). Full descriptions can be found in Appendix 1.2, locations on Figures 2 and 3 and Plates 11 18.
- 4.2.18 Only Sites **68** and **72** lie across the pipe route but the significance of both these sites is very low so need not be considered any further.

### 5 ASSESSMENT

#### 5.1 DISCUSSION OF IMPLICATIONS

- 5.1.1 The ten areas discussed below are those areas most likely to be affected by the pipe route and their potential for archaeological remains is assessed (see Figure 5). Those with the greatest potential are then discussed with regards to mitigation in Section 6.
- 5.1.2 *Rothersyke Farm, Lowside (Site 5).* No features were identified along the line of the pipe route itself and the present land parcels are identical to that observed on the tithe and First Edition Ordnance Survey, though land use was arable as compared to pasture. It is unlikely that any post-enclosure (medieval onwards) remains will be encountered. The potential is for earlier remains as the St Bees and West Cumberland Plains were the first to be occupied post-glaciation. The southern end of the pipe route sites in a landscape of spot-finds from the prehistoric periods. As no modern (deep) ploughing has appeared to have occurred on site the potential for survival is good, excavations within the area (Site 6) record topsoil and subsoil depths of between 0.25 and 0.35m (LUAU 1994). The likely hood of any remains is though low.
- 5.1.3 L & NW & Furness Joint Railway (Site 9). No surface remains other than the embankment and cuttings for the rail line were observed during the walkover. The Third Edition maps show no associated rail structures on or near the pipe route and research suggests none is likely (Morris 2003).
- 5.1.4 *Church of St Leonard (Site 16).* The pipe route runs along the lane to the north of the church so the present fabric will not be affected. The previous church (the present one was built in 1841) most likely occupied the same spot. The potential lies in early medieval remains associated with the original church that may lie under the road, i.e. boundaries and burials.
- 5.1.5 Thornhill-Blackbeck-Calder Bridge Road (Site 21). The exact course of the road is unknown but the extent recorded by the CCCHER follows the unclassified road to the east of the modern A595. If this is the case then the area where the pipe route and roman road intersect may be relatively un-truncated. Nothing was visible on the surface but the greatest potential for associated structures from the Roman period lies in the fields to the east of the road. No Roman centre is associated with Egremont so remains are unlikely to consist of burials the Roman practice generally being to inter their dead in cemeteries located along roads outside of the town boundaries. Based on the nearest excavations (Sites 6 and 7) overburden depths are likely to be around c.0.35m though the fields to the east of the pipe route slope up to the east, so given the effects of hill wash (colluviation) overburden depths might be deeper.

- 5.1.6 *Egremont, St Bees Field System (Site 27).* Nothing was visible on the surface during the walkover survey and there is no evidence for modern ploughing so survival of medieval or possible early medieval remains is good.
- 5.1.7 *Florence Mine (Site* **30**). First shown on the Third Edition Ordnance Survey (1929d) the mine reaches its maximum extent c.1960 when it joins Ullcoats Mine (Site **34**). The pipe route passes along a lane to the northwest of the site with origins before the mine. No mining structures were observed in the fields to the northwest. The pipe route though does pass through a railway branch line from the mine. The Third Edition maps show no associated structures within the line of the pipe route so the potential for remains lies in temporary structures that would not have made it on to any maps. These might include dwellings for the workers who came to the area because of the naturally small local populations and therefore the availability of work.
- 5.1.8 *Little Mill, Mill Race (Site* **31**). This still exists in the landscape as a small stream up until Florence Mine but originated in the mid-1800's. No signs of revetment were obvious but this would have taken the form of stone or wooden structures. Construction methods for the pipe route in relation to water courses are unknown, so whether it would impact the Mill Race is also unknown.
- 5.1.9 *Cleator Dyke (Site 33).* Nothing was visible on the surface during the walkover survey and there is no evidence for modern ploughing so the potential for the survival of any ditch remains is good. Modern satellite imagery shows signs of a surviving feature to the east of the parcel whereas the pipe route runs along the western field edge. It is unknown what date this feature might be.
- 5.1.10 *Kinniside Mine (Site 38).* The maximum extent of the area of Kinniside Mine comes within 100m of the pipe route. The walk over survey saw nothing beyond the levels that typify its northwest boundary though Mr G Finlinson, Managing Director of the Egremont Mining Company, believes they extended further, and that mine shafts might exist further to the north and west towards a mine at Hazel Holme (Finlinson *pers. comm.*). Further research (Banks *et al* 1994) suggests that if not mine shafts levels may have existed further to the northwest (**Plate 19**).
- 5.1.11 Tithe Fields Woodlands (Field numbers 204 224-226). No surface remains were visible during the walk over. The evidence of potential kiln or some other burning-based industry is purely from field-names on the tithe apportionment. If any industry did exist on the site it is likely to be either cottage-industry in size related to the nearby farms at Row Foot or alternatively associated with the much closer Briscoe Mill. Pre-17th century drying kilns for corn mills were situated away from the mill itself (Davies-Shiel 1979, 63). The Southern field (Kiln How 204) had been left to go to waste and scrub and was considerably

more wet underfoot than the other three – perhaps indicating its wooded past and subsequent felling.

### 6 MITIGATION

#### 6.1 MITIGATION RECOMMENDATIONS

- 6.1.1 The following section will consider what evaluation and/or mitigation techniques might be appropriate to the assessed areas of archaeological potential (see **Figure 6**). Further it will consider if there are any limitations that might impact on such works; access issues, current land-use, overhead power-lines, for example.
- 6.1.2 Rothersyke Farm, Lowside (Site 5) and the southern end of the pipe route to Gulley Flatts. The greatest potential is for earlier remains from prehistoric to early medieval periods. The likely hood of any remains is though low given the dispersed nature of such remains (small populations so discrete remains) verses the size of the width of the pipe route. A programme of geophysical survey is recommended in the first instance.
- 6.1.3 *L* & *NW* & *Furness Joint Railway* (*Site 9*). Due to the low probability of any associated remains no further work is recommended.
- 6.1.4 *Church of St Leonard (Site 16).* The potential lies in early medieval remains associated with the original church that may lie under the road, i.e. boundaries and burials. To this end a strategy involving targeted watching briefs along the last c.200m of this branch of the pipe route, in front of the church, is suggested.
- 6.1.5 *Thornhill-Blackbeck-Calder Bridge Road (Site 21).* The greatest potential for associated structures from the Roman period lies in the fields to the east of the road. Geophysical survey of the line of the pipe route within the two fields (centred at NGR NY 01540 09750 and NY 01570 09820) is recommended to at least aid in further determination which could involve a programme of trial trenching.
- 6.1.6 *Egremont, St Bees Field System (Site* 27). Nothing was visible on the surface during the walkover survey and there is no evidence for modern ploughing so survival of medieval or possible early medieval remains is good. Geophysical survey of the line of the pipe route within the field (centred at NGR NY 01790 10980) is recommended to at least aid in further determination which could involve a programme of trial trenching.
- 6.1.7 *Florence Mine (Site* **30**). The Third Edition maps show no associated structures within the line of the pipe route so the potential for remains lies in temporary structures that would not have made it on to any maps. Geophysical survey of the line of the pipe route within the field (centred at NGR NY 01760 10410) is recommended to at least aid in further determination.

- 6.1.8 *Little Mill, Mill Race (Site 31).* This still exists in the landscape as a small stream up until Florence Mine. Construction methods for the pipe route in relation to water courses are unknown, so whether it would impact the Mill Race is also unknown.
- 6.1.9 *Cleator Dyke (Site* **33**). The potential for the survival of any ditch remains is good. Modern satellite imagery shows signs of a surviving feature to the east of the parcel whereas the pipe route runs along the western field edge. Geophysical survey of the line of the pipe route within the field (centred at NGR NY 02070 12580) is recommended to at least aid in further determination which could involve a programme of trial trenching.
- 6.1.10 *Kinniside Mine (Site 38).* There is potential for the remains of mine shafts and levels along the pipe route. Geophysical survey of the line of the pipe route within the two fields closest to the mine are (centred at NGR NY 03960 14780 and NY 04050 14860) is recommended to at least aid in further determination.
- 6.1.11 *Tithe Fields Woodlands (Field numbers* **204 224-226**). Field-name evidence hints at the potential for kiln remains. Geophysical survey of the line of the pipe route within the three remaining fields (centred at NGR NY 01740 11720, NY 01760 11820 and NY 01790 11900) is recommended to at least aid in further determination.
- 6.1.12 No major obstructions exist in relation to the investigation of these areas. But if further archaeological works do take place then the feasibility of such investigations will have to be re-assessed at that time.

### 6.2 SECONDARY BENEFITS.

6.2.1 This area of Cumbria has suffered economic decline since the post-war era. Projects such as the Florence Mine Heritage Centre aim to at least focus the counties eye on the many historic (and cultural) riches of the area. The results from such archaeological investigations such as these feed in to our understanding of the changing landscapes; historical, environmental, economical.

### 7 CONCLUSIONS

#### 7.1 CONCLUSIONS

- 7.1.1 Wardell Armstrong Archaeology Ltd (WA) were invited by United Utilities, to undertake a desk-based assessment and walkover survey of the South Egremont pipeline route (from NGR NY 0040 0850 to NY 0855 1531) prior to works commencing.
- 7.1.2 Bronze Age scrapers which have been found in close vicinity to the proposed pipeline route attest to prehistoric activity in the area. The pipeline also crosses what is believed to be the course of a Roman road.
- 7.1.3 Later, during the 18th to 20th centuries the River Ehen became an intensive focus for industry. The proposed route affects the sites of Florence Mine, Little Mill millrace, the course of the L & NW & Furness railway, and also lies in close proximity to the site of Kinniside lead mine.
- 7.1.4 A 200m search area of the route recorded three Grade II listed buildings and 29 non-designated heritage assets. Of these the pipe route passes through the recorded extents of seven and it is possible that the pipe route also intercepts with the extents of an eighth, though it is currently outside of this assets recorded extent.
- 7.1.5 The walkover survey recorded eight additional sites along the route. A rubblestone barn, two gate-posts five disused field boundaries. Two of the field boundaries lie across the pipe route but the significance of both these sites is very low so need not be considered any further.
- 7.1.6 Ten areas of archaeological potential were identified with further work recommended on eight.
- 7.1.7 These works consist of a single watching brief (Church of St Leonard) and seven geophysical surveys along the route in the first instance (Rothersyke Farm and the southern end of the pipe route, Thornhill-Blackbeck-Calder Bridge Road, Egremont St Bees Field System, Florence Mine, Cleator Dyke, Kinniside Mine and Tithe Fields at NGR NY 01740 11720). No further work is recommended in the area of the L & NW & Furness Joint Railway and in one area no mitigation could be put forth due to unknown construction methods (Little Mill, Mill Race).
- 7.1.8 Following on from this programme of works, it is likely that in some areas a phase of field evaluation will be required. The scope of which will be informed by the results of the geophysical surveys.

### 8 BIBLIOGRAPHY

- Armstrong, A. M., Mawer, A., Stenton, F. M., Dickens, B., 1950. The Place-names of Cumberland. *English Place-name Society*, **20-22**. Cambridge, English Place-name Society
- Banks, T. M., Nichol, C., Bridge, D.G., 1994. Lead Mines in the Manor of Kinniside. Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society, 44, 215-248
- Bell, M., Walker, M. J. C., 2005. *Late Quaternary Environmental Change: Physical and Human Perspectives*. Harlow, Pearson Education Limited
- BGS, 2012. *Geology of Britain Viewer* [online]. Available at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html [Accessed 10th May 2012]
- Cherry, J., Cherry, P. J., 1973. Mesolithic habitation sites at St Bees. Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society (New Series), 73, 47-66
- Conway, M. 2011. *Review of the Lake District Historic Landscape Characterisation*. Lake District National Park Authority, Unpublished
- Cumbria County Council, English Heritage, 2000. Extensive Urban Assessment: Archaeological Assessment Report Egremont. Cumbria County Council, Unpublished
- Cumbria County Council, 2009. A Guide to Using the Cumbria Historic Landscape Characterisation Database for Cumbria's Planning Authority. Carlisle, Cumbria County Council
- Davies-Shiel, M., 1979. Watermills of Cumbria. Dalesman Books
- Davies-Shiel, M., 2003. Some Lumps and Bumps on Cumbrian Fields and Rougher Lands. Unpublished
- de la Bédoyère, G., 2000. *Hadrian's Wall: History and Guide*. Stroud, Tempus Publishing Limited
- Ekwall, E., 1960. The Concise Oxford Dictionary of English Place Names. Oxford, Oxford University Press
- English Heritage, 2007. Understanding the Archaeology of Landscapes: A guide to good recording practice. London, English Heritage
- English Heritage, 2012. *The National Heritage List for England* [online]. Available at: http://www.english-heritage.org.uk/professional/protection/process/nationalheritage-list-for-england.html [Accessed 12 May 2012]

- Enclosure Award, 1825. *Cleator Moor and Egremont: Dint Commons*. Carlisle Record Office ref. Q/RE/1/61
- Fair, M. C., 1937. Notes on early Copeland. *Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society (New Series)*, **37**, 72-88
- GeoQuest Associates, 2004. *Geophysical Survey of an Area of Proposed Extension to Grange Quarry, Wilton, Egremont, Cumbria.* GeoQuest Associates, Unpublished
- Giecco, F., 2012. An Archaeological Desk-Based Assessment and Walkover Survey for the South Egremont Pipeline. WA Archaeology, Unpublished
- Hodkingson, D., Huckerby, E., Middleton, R., Wells, C. E., 2000. *The Lowland Wetlands* Of Cumbria, Northwest Wetlands Survey 6. Lancaster, Lancaster Imprints
- Hodskinson and Donald, 1774. Map of Cumberland
- IfA, 2011. Standards and Guidance for Historic Environment Desk-Based Assessment. Reading, Institute for Archaeologists
- Jones, C. J., 2004. *Report on an Archaeological Watching Brief at Egremont Castle, Egremont, Cumbria.* North Pennines Archaeology Ltd, Unpublished
- LUAU, 1994. *Queens Drive, Egremont, Cumbria: archaeological evaluation.* Lancaster University Archaeological Unit, Unpublished
- LDNPA, 2010. Lake District National Park Core Strategy including Proposals Map. Kendal, Lake District National Park Authority
- Mills, A. D., 1998. A Dictionary of English Place-Names. Oxford, Oxford Paperbacks
- Morden, 1695. Map of Cumberland
- Morris, R., 2003. The Archaeology of Railways. Stroud, Tempus Publishing
- Neil, N. R. J., 1993. *Gulley Flats Egremont Archaeological Evaluation*. Lancaster University Archaeological Unit, Unpublished
- Newman, C., Hardie, C., 2007. *The Cumbria Historic Landscape Characterisation Project: The Lake District National Park*. Kendal, Historic Environment Services, Lake District National Park
- Nickson, D., Macdonald, J. H., 1955. A preliminary report on a microlithic site at Drigg, Cumberland. Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society (New Series), **55**, 17-29
- NPPF, 2012. *National Planning Policy Framework: Archaeology and Planning*. London, Department for Communities and Local Government
- Ordnance Survey, 1861. Ordnance Survey First Edition County Series, Cumberland Sheet LXXII, XI (25" to 1 mile)

- Ordnance Survey, 1865a. Ordnance Survey First Edition County Series, Cumberland Sheet LXVII, XII (25" to 1 mile)
- Ordnance Survey, 1865b. Ordnance Survey First Edition County Series, Cumberland Sheet LXVII, XVI (25" to 1 mile)
- Ordnance Survey, 1865c. Ordnance Survey First Edition County Series, Cumberland Sheet LXVIII, IX (25" to 1 mile)
- Ordnance Survey, 1865d. Ordnance Survey First Edition County Series, Cumberland Sheet LXVIII, XI (25" to 1 mile)
- Ordnance Survey, 1865e. Ordnance Survey First Edition County Series, Cumberland Sheet LXVIII, XII (25" to 1 mile)
- Ordnance Survey, 1865f. Ordnance Survey First Edition County Series, Cumberland Sheet LXXII, IV (25" to 1 mile)
- Ordnance Survey, 1865g. Ordnance Survey First Edition County Series, Cumberland Sheet LXXII, VII (25" to 1 mile)
- Ordnance Survey, 1865h. Ordnance Survey First Edition County Series, Cumberland Sheet LXXII, VIII (25" to 1 mile)
- Ordnance Survey, 1899a. Ordnance Survey Second Edition County Series, Cumberland Sheet LXVII, XII (25" to 1 mile)
- Ordnance Survey, 1899b. Ordnance Survey Second Edition County Series, Cumberland Sheet LXVII, XVI (25" to 1 mile)
- Ordnance Survey, 1899c. Ordnance Survey Second Edition County Series, Cumberland Sheet LXVIII, IX (25" to 1 mile)
- Ordnance Survey, 1899d. Ordnance Survey Second Edition County Series, Cumberland Sheet LXVIII, XI (25" to 1 mile)
- Ordnance Survey, 1899e. Ordnance Survey Second Edition County Series, Cumberland Sheet LXVIII, XII (25" to 1 mile)
- Ordnance Survey, 1899f. Ordnance Survey Second Edition County Series, Cumberland Sheet LXXII, IV (25" to 1 mile)
- Ordnance Survey, 1899g. Ordnance Survey Second Edition County Series, Cumberland Sheet LXXII, VII (25" to 1 mile)
- Ordnance Survey, 1899h. Ordnance Survey Second Edition County Series, Cumberland Sheet LXXII, VIII (25" to 1 mile)
- Ordnance Survey, 1899i. Ordnance Survey Second Edition County Series, Cumberland Sheet LXXII, XI (25" to 1 mile)

- Ordnance Survey, 1926a. Ordnance Survey Third Edition County Series, Cumberland Sheet LXVII, SE (6" to 1 mile)
- Ordnance Survey, 1926b. Ordnance Survey Third Edition County Series, Cumberland Sheet LXVIII, SE (6" to 1 mile)
- Ordnance Survey, 1926c. Ordnance Survey Third Edition County Series, Cumberland Sheet LXVIII, SW (6" to 1 mile)
- Ordnance Survey, 1926d. Ordnance Survey Third Edition County Series, Cumberland Sheet LXXII, NE (6" to 1 mile)
- Ordnance Survey, 1926e. Ordnance Survey Third Edition County Series, Cumberland Sheet LXXII, SE (6" to 1 mile)
- Parsons, J., 2012. Brief for a Desk-Based Assessment and Walkover Survey on the Proposed Pipeline Route between South Egremont and Ennerdale, Cumbria. Cumbria County Council, Unpublished
- Pennington, W., 1970. Vegetation history in North West England. In: D. Walker, R. G. West, ed. 1970. Studies in the vegetational history of the British Isles. Cambridge, Cambridge University Press, 41-80
- Pennington, W., 1975. The effect of Neolithic man on the environment in north-west England: the use of absolute pollen diagrams. In J. G. Evans, S. Limbrey, H. Clare, ed. 1975. The effect of man on the landscape: the Highland Zone, Council for British Archaeology Research Report, **11**. London, CBA, 74-86
- Quartermaine, J., 2003. Ennerdale West Cumbria: historic landscape survey. Oxford Archaeology (North), Unpublished
- Saxton, 1576. Map of Cumberland
- Speed, 1610. Map of Cumberland
- SSEW, 2012. *Soilscapes Viewer* [online]. Available at: http://www.landis.org.uk/soilscapes/ [Accessed 10th May 2012]
- The Cumbrian Railway Association, 2012. West Cumberland. Available at: http://www.cumbrianrailways.org.uk/WestCumberland.php [Accessed 14th May 2012]
- Tithe Map and Tithe Award, 1838. *St Bees Parish, Lowside Quarter*. Carlisle Record Office ref. DRC/8/122
- Tithe Map and Tithe Award, 1839-1841. *Cleator Parish*. Carlisle Record Office ref. DRC/8/46
- Tithe Map and Tithe Award, 1840. *Beckermet St John Parish, Briscoe*. Carlisle Record Office ref. DRC/8/30
- Tithe Map and Tithe Award, 1841-1842. *Egremont Parish*. Carlisle Record Office ref. DRC/8/68
- Tithe Map and Tithe Award, 1844. *St Bees Parish, Kinniside*. Carlisle Record Office ref. DRC/8/106
- Tithe Map and Tithe Award, 1844-1845. *St Bees Parish, Ennerdale*. Carlisle Record Office ref. DRC/8/71/1-2
- Watts, V., Insley, J., Gelling, M., eds., 2011. The Cambridge Dictionary of English Place-Names: Based on the Collections of the English Place-Name Society. Cambridge, Cambridge University Press
- Wilson, J. ed, 1901. Victoria County History of Cumberland Vol. 1. Westminster, Constable
- Winchester, A. J. L., 1979. *Cumbrian Towns Survey*. Cumbria County Council, Unpublished

# APPENDIX 1: GAZETEER OF SITES

Site	Reference	Type <sup>1</sup>	Name	Description	Period <sup>2</sup>	NGR
1	6471	CCC	Flint Finds	A number of lightly patinated flints with BA characteristics, including several crudely made scappers and a core. Found on high ground	BA	NX 99100 08900
2	6472	CCC	Coulderton Flint Find	Coulderton Flint Find. A BA type flake core, reworked as a side scraper, found during field walking	BA	NX 99600 09000
3	16561	CCC	Snellings Earthwork, Lowside Quarter	Earthwork revealed by aerial photography		NX 99700 08800
4	1248	CCC	Ehenside Tarn	Neolithic dwelling site discovered during draining of Ehenside Tarn in 1869; further excavations in 1971. Finds include stone axes of Great Langdale origin. Dated 5051 +/- 300BP		NY 002700 07050
5	40888	CCC	Rothersyke Farm, Lowside Quarter	Farmstead shown on the 1st edition Ordnance Survey map of 1867		NY 00350 08450
6	1136272	CCC	Queen's Drive	Trial trenching in response to plans for housing development. No significant finds/features encountered. LUAU 1994		NY 00350 10050
7	1134617	ССС	Gulley Flats	Trial trenching, a topographical survey and a geophysical survey were carried out on the site of a proposed housing development. Evidence for boundary ditches, land drains and building platforms was discovered. Neil 1993		NY 00650 10300
8	12171	CCC	Low Mill, Egremont	Low Mill - Type of mill unspecified. Also incorporates Mill Dam, weir and sluice. Could be connected with the iron foundry beside it (SMR 12166)		NY 00720 08630

Site	Reference	Type <sup>1</sup>	Name	Description	Period <sup>2</sup>	NGR
9	12215	CCC	L & NW & Furness Joint Railway	The railway opened to passenger and goods traffic in 1857. By 1973 only a single line for goods traffic from Whitehaven to Egremont, and a branch line to Rowrah, remained in use for the local iron ore traffic. NGR on the HER record is NY 00800 14600	P.Med	NY 01330 09700
10	43697	CCC	Egremont Park, Egremont	Site of a deer park, documented in 1770 N		NY 01000 09500
11	1299	CCC	Motte	Alleged remains of a motte at Wodowbank Cop	Med	NY 01040 08190
12	5724	CCC	Egremont Linear Earthworks	Traces of earthworks, including old boundaries, R and F and possible trackway. Positioned on crook of river		NY 01100 09900
13	12177	CCC	Egremont Paper Mill, Lowside Quarter	Disused Paper Mill	P.Med	NY 01220 09880
14	1137128	LB	17 Bridge End	Grade: II Toll-house, now private dwelling. Dated 1851 on base to finial	P.Med	NY 01278 10328
15	1336031	LB	K6 Telephone Kiosk	Grade: II Designed 1935 by Sir Giles Gilbert Scott	P.Med	NY 01296 10304
16	1336033	LB	Church of St Leonard	Grade: II Parish Church. C12 chancel, raised in late C18; rest of church rebuilt 1841	Med	NY 01422 13468
17	1086696	LB	Lych Gate and Quadrant Walls	Grade: II Lych gate and quadrant walls to churchyard entrance; c1903 by J.H. Martindale	P.Med	NY 01422 13489
18	43259	CCC	Low Mill, Cleator, Cleator Moor	Corn mill and mill race shown on the 1st edition Ordnance Survey map of 1867	P.Med	NY 01460 13125

Site	Reference	Type <sup>1</sup>	Name	Description	Period <sup>2</sup>	NGR
19	1336009	LB	Old Hall and Forecourt	Grade: II Symmetrical group of houses; Late Cl7 Hall, remodelled, subdivided and extended 1845 (date, with initials TA over doors to end blocks)	P.Med	NY 01465 13451
20	12174	CCC	Beggargill Quarry, St John Beckermet	Site of a disused quarry		NY 01500 09600
21	1255	CCC	Thornhill- Blackbeck- Calder Bridge Road	Course of Roman road from Thornhill-Blackbeck-Calder Bridge. Goes through R It John Beckermet, Haile, St Bridget Beckermet parishes		NY 01500 10000
22	1210	CCC	Lowside Quarter Road	A paved road, possibly Roman, found at St Thomas Cross		NY 01500 10040
23	12885	CCC	Little Mill, St John Beckermet	Corn Mill known as Little Mill and shown on the Old OS map. According to the Directories, it was used by a Corn Miller called Henry Cooke in 1829 and 1847. In 1924 Little Mill was sold as a small holding with a dwelling house in a sale of Wyndham Properties. The millrace runs North (SMR 12328), eventually reaching Lillcoats (SMR 12860)		NY 01500 10320
24	17731	CCC	Cleator Bloomsmithy	Site of a Bloomsmithy dating from 1670 - 1688	P.Med	NY 01500 13150
25	16592	ССС	Hardheads Mine, St John Beckermet	Disused mine at Hardheads. Incorrect NGR.01865 10245		NY 01700 10400
26	5785	CCC	Egremont Mine Workings. Ridge and Furrow	Egremont Mine Workings, Ridge and Furrow. Traces of mine workings, some R & F near the railway and the banking and cuttings of the now abandoned railway to Ulcoats Mine	P.Med	NY 01700 10500

Site	Reference	Type <sup>1</sup>	Name	Description	Period <sup>2</sup>	NGR
27	6579	CCC	Egremont, St Bees Field System	Egremont, St Bees Field System. Remains of Egremont town fields are very visible in the present field boundaries when seen from NY015097	Med	NY 01700 11000
28	12323	CCC	High Mill, Cleator, Cleator Moor	High Mill corn mill was used in the 1860's	P.Med	NY 01700 13450
29	4613	CCC	Mortar Find	Mortar Find, Cleator. Sandstone		NY 01700 13500
30	12339	CCC	Florence Mine, St John Beckermet	Small area that was mine still has roofed buildings. Florence mine. Worked 1915 and combined with Ullcoats in 1960	P.Med	NY 01800 10100
31	12328	CCC	Little Mill, Mill Race, St John Beckermet	A Mill Race used to run from Little Mill (SMR 12885, Site <b>23</b> ) to a now disused Reservoir. It then supplied Ullcoats mill (SMR 12860, Site <b>34</b> ). The Mill Race appears to have been supplied by Kirk Beck	P.Med	NY 01815 10442
32	4169	CCC	Cleator Flax Mill, Cleator Moor	Cleator Flax Mill, Cleator Moor. Cleator Flax Mill was used for production of linen thread until 1924. The present fine crenellated frontage near the river Eden was probably built by Thomas Ainsworth in mid C19, on the site of earlier flax and sailcloth mills	P.Med	NY 02000 13700
33	13547	CCC	Cleator Moor Dyke	An earthwork dyke/embankment shown on aerial photography		NY 02200 12500
34	12327	CCC	Ullcoats Mine, St John Beckermet	Disused mine with Roofed Buildings and a dismantled Railway leading to a mine which is still in use	P.Med	NY 02700 10550
35	12898	CCC	Low Wath Mill, Cleator Moor	Site of Low Wath Mill. There are several references to this mill, and the 1972 OS 1:10,000 shows two buildings close to the Ehen, adjacent to what appears to be a mill race	P.Med	NY 02710 14050
36	5748	CCC	Wath Bridge Mound	Wath Bridge Mound		NY 03310 14490

Site	Reference	Type <sup>1</sup>	Name	Description	Period <sup>2</sup>	NGR
37	30468	LDNPA	Mill	Site of Kinniside Mill		NY 03570 14720
38	16825	LDNPA	Kinniside Lead Mine	In 1829 the lead mine was described as one of the 3 most productive in the district. In 1873 it has been suggested that Kinniside has been worked for at least 100 years		NY 04300 14650
39	30467	LDNPA	Fulling Mill	Site of a fulling mill of unknown date		NY 04990 15650
40	1203	CCC	Salter Deserted Medieval Village	A deserted medieval settlement	Med	NY 05000 16000
41	20357	LDNPA	Stone Axe	A stone axe, the cutting edge had been sharpened while the rest of the implement was left in its natural state	Prehist	NY 06000 14000
42	4450	LDNPA	St Mary's Church, Ennerdale	Medieval date with post-Medieval restorations		NY 06810 15880
43	1018500	SAM	Tongue How	Prehistoric stone hut circle settlement, field systems, funerary cairns, Romano- British farmstead, shieling and lynchets	Prehist – RB	NY 07183 09720
44	11945	LDNPA	Blakeley Rise Iron Ore Level	Site of disused ironstone workings of Post Medieval (Tudor) date. A disused Iron Ore Level marked as 'disused' on the OS 6" 1st edition map of Cumberland sheet 68 dated 1900 (S1177), not used before 1866	P.Med	NY 07250 14690
45	1211	LDNPA	Ennerdale and Kinniside Bloomery	Bloomery of unknown date		NY 07650 16040
46	8780	LDNPA	Hearth	Date uncertain, identified from Ordnance Survey map		NY 07650 16040
47	12064	LDNPA	Ennerdale Corn Mill	Site of a corn mill of unknown date		NY 08170 15300

Site	Reference	Type <sup>1</sup>	Name	Description	Period <sup>2</sup>	NGR
48	30461	LDNPA	Potash Kiln	Site of a potash kiln of unknown date		NY 08220 14980
49	1007236	SAM	Cairns and Hut Circles	At the junction of River Calder and Whoap Beck	BA	NY 08250 13111
50	11946	LDNPA	Kinney How Iron Ore Levels	Tite of disused ironstone workings of Post Medieval date. Three or more Iron Dre Levels in a fairly linear development along a Beck, in use between c1860 and c1900		NY 08450 14700
51	20354	LDNPA	Shieling, West of Revelin Crag	Remains of shieling 34 by 13 feet with entrance in west side, orientated north to south and approximately 10m by 4m. The entrance is on the west side, north of the centre. Walls spread 1m to nearly 2m	P.Med	NY 08880 14680
52	1196	LDNPA	Revelin Crag Shieling	Crag Found above Revelin Crag on the S side of Ennerdale Water, between 2 streams above their confluence in Ben Gill. This hut appears to be of the "later almost square type and is perhaps to be associated with the nearby sheepfold." The shieling is orientated E-W, 22 x 21 ft, has 1 room with entrance in N, near NE angle. Walls very spread, but originally probably ca 3 ft thick		NY 09000 14800
53	23969	LDNPA	Shieling, West of Revelin Crag	Remains of one roomed shieling measuring 22 by 21 feet (22 by 16 feet originally) with an entrance in the north; walls are very spread	P.Med	NY 09010 14660
54	1475384	LDNPA	Ennerdale Landscape Survey	Quartemaine 2003		NY 09050 15840
55	36656	LDNPA	Quarries and Trackways	Northwest of Revelin Crag, Ennerdale	P.Med	NY 09055 15045
56	15904	LDNPA	Ennerdale Water Bloomery	Bloomery of Post Medieval date	P.Med	NY 09060 15350
57	38790	LDNPA	Find of Possible Iron Slag	Possible site of bloomery or iron working site, identified from iron slag found on site. Probably medieval to post medieval date	Med	NY 09075 16065

Site	Reference	Type <sup>1</sup>	Name	Description		NGR
58	27804	LDNPA	Dam, Revelin Crag	A small section of dry-stone walling, which dams a tributary gill lying between Ben Gill and Revelin Crag. The wall is 7m long and runs along an east-west axis. It is up to 2m wide and is partially collapsed at its western end, but was probably only 1m wide originally. The wall is up to 0.6m high and is made of small to medium angular and rounded stones		NY 09094 14632
59	32965	LDNPA	Quarries and Ramps	Two small field quarries on the shore of Ennerdale Water below Revelin Crag. F They are 15m apart and measure 7.5-8m in diameter with a maximum working face of 3m high		NY 09100 15070
60	36660	LDNPA	Bield	South of Revelin Crag, Ennerdale		NY 09251 14219
61	27808	LDNPA	Bield/Shelter	A small, circular dry-stone shelter of unknown date and function. It is approximately 3m in diameter by 0.4m high. The walls are 0.4m thick and feature four rough courses of angular scree. On the northern side a large earthfast stone has been incorporated into the structure. It is situated in an area of scree at the lake edge, on the bottom slope of Revelin Crag		NY 09263 15066
62	32966	LDNPA	Shelter at Revelin Crag	A small circular dry-stone shelter of unknown date and function. It is approximately 3m in diameter and 0.4m high. The walls are 0.4m thick and feature 4 rough courses of angular scree. On the northern side a large earthfast stone has been incorporated into the structure. It is situated in an area of scree at the lake edge, on the bottom slope of Revelin Crag. This scree area has several possible instances of rough walling which run downhill		NY 09263 15066
63	32975	LDNPA	Peat Cutting at Revelin Crag	Ennerdale and Kinniside		NY 09310 14610
64	30469	LDNPA	Iron Mine	Site of an Iron Mine - 16th - 17th century, thin veins, worn out included. The mouth of the level has collapsed and is now difficult to identify	P.Med	NY 09500 14800

Site	Reference	Type <sup>1</sup>	Name	Description	Period <sup>2</sup>	NGR
65	36963	LDNPA	Crag Fell Iron	Consists of numerous small trials and mines on the fells to the South of	P.Med	NY 09650
			Mines	Ennerdale Water: Heckbarley, Grike, Crag Fell, The Side and Ennerdale Fell.		14650
				Most of the workings are very small, though two, Main Drift and Iron Crag		
				Mine, are quite substantial. It is believed that the area has been worked,		
				intermittently, over a period of several hundred years but among all the		
				known workings only one is pre-1860 - Old Crag Fell Mine		

<sup>1</sup> CCC, non-designated asset from Cumbria County Council; LDNPA, non-designated asset from Lake District National Park Authority; LB, designated asset Listed Building; SAM, designated asset Scheduled Ancient Monument

<sup>2</sup> Neo, Neolithic; BA, Bronze Age; Prehist, Prehistoric; RB, Romano-British; E.Med, Early Medieval; Med, Medieval; P.Med, Post Medieval; blank, Unknown

Site No.	66	NGR	NY 01740 13385	
Name	Barn at Low Kiln How			
Period	Post Medieval	Туре	BARN	
Source	Ordnance Survey 1899f; WA walkover survey			

## WALKOVER RESULTS

### Description

Former rubblestone barn (c.5.5m by c.5.0m, surviving to a height of c.3.5m) with ashlar quoins. Simple, single cell construction with arch in NE elevation (c.2.5m by c.1.5m). Evidence of a former window to SE (c.1.2m by c.1.0m surviving). Now in a poor condition and partly ruinous with pitched roof removed. Located in the western corner, near Blackhow Bridge, in a field entitled Low Kiln How (270) on the tithe maps.

Mr J. Scrugham	Land Use	Pasture, Grazing	
2 and 7	Plate	11	
67	NGR	NY 02137 13350	
Stony Dale Gate			
Post Medieval	Туре	GATE PIER	
Tithe Map and Tithe Award 1839-1841; WA walkover survey			
	Mr J. Scrugham 2 and 7 67 Stony Dale Gate Post Medieval Tithe Map and Tithe Award 1	Mr J. Scrugham Land Use 2 and 7 Plate 67 NGR Stony Dale Gate Post Medieval Type Tithe Map and Tithe Award 1839-1841; WA walkover surv	

## Description

Gate post, between Stony Dale (Field number 266) and High Meadow (267), as titled on tithe map. Position away from track probably associated with Stony Dale Wood (266a). Dimensions: c.1.15m by c.0.3m by c.0.3m. Three post slots. Single piece of worked sandstone.

Land Owner	Mr J. Scrugham	Land Use	Pasture, Grazing
Figure	2 and 7	Plate	12
Site No.	68	NGR	NY 02400 13700
Name	Disused Field Boundary		
Period	Post Medieval	Туре	FIELD BOUNDARY
Source	First Edition Ordnance Surve	y 1865b; WA walkover survey	7

## Description

Line of disused field boundary corresponds to boundary identified on First Edition Ordnance Survey (1865b). Orientated NW-SE, c.150m long by c.1.2m wide by c.0.25m high.

Land Owner	Mr D. Jackson	Land Use	Pasture, Grazing
Figure	2 and 7	Plate	13

Site No.	69	NGR	NY 05630 15290			
Name	Low Toadhole Bank Gate Post					
Period	Post Medieval	Туре	GATE PIER			
Source	Tithe Map and Tithe Award 1844; WA walkover survey					

#### Description

Gate post on Low Toad?hole Bank (29) as titled on tithe map. Dimensions: c.0.9m by c.0.3m by c.0.3m. Three complete post slots, one incomplete. Single piece of worked sandstone.

Land Owner	Mrs P. Hobson	Land Use	Pasture, Grazing			
Figure	3 and 8	Plate	14			
Site No.	70	NGR	NY 06645 15158			
Name	Disused Field Boundary					
Period	Post Medieval	Туре	FIELD BOUNDARY			
Source	First Edition Ordnance Survey 1865e; WA walkover survey					

## Description

Line of disused field boundary corresponds to boundary identified on First Edition Ordnance Survey (1865e). Orientated NE-SW, c.125m long by c.1.4m wide by c.0.6m high. Associated with Site 71.

Land Owner	Mr & Mrs S. Hardisty; Mr W. Hardisty	Land Use	Pasture, Grazing 15			
Figure	3 and 8	Plate				
Site No.	71	NGR	NY 06605 15170			
Name	Disused Field Boundary					
Period	Post Medieval	Туре	FIELD BOUNDARY			
Source	First Edition Ordnance Survey 1865e; WA walkover survey					

## Description

Line of disused field boundary corresponds to boundary identified on First Edition Ordnance Survey (1865e). Orientated N-S, c.150m long by c.2.0m wide by c.0.2m high. Associated with Site 70.

Land Owner	Mr & Mrs S. Hardisty; Mr W. Hardisty	Land Use	Pasture, Grazing
Figure	3 and 8	Plate	16

Site No.	72	NGR	NY 06912 15295		
Name	Removed Field Boundary				
Period	Post Medieval	Туре	FIELD BOUNDARY		
Source	First Edition Ordnance Survey 1865e; WA walkover survey				

## Description

Line of disused field boundary corresponds to boundary identified on First Edition Ordnance Survey (1865e). Consist of at least four circular depressions along an approximate N-S alignment. Each depression is c.0.6m in diameter and c.0.1m in depth. Possible represent removed tree or hedge alignment.

Land Owner	Mr & Mrs S. Hardisty; Mr W. Hardisty	Land Use	Pasture, Grazing
Figure	3 and 8	Plate	17
Site No.	73	NGR	NY 07362 15138
Name	Disused Field Boundary		
Period	Post Medieval	Туре	FIELD BOUNDARY
Source	Tithe Map and Tithe Award	, 1844-1845; WA walkover su	rvey
Description			
Disused southern field bou wire fence.	ndary of Far Hoghouse Close	(88). Has been left to decay b	being replaced by a post and
Land Owner	Mr & Mrs S. Hardisty; Mr W. Hardisty	Land Use	Pasture, Grazing
Figure	3 and 8	Plate	18

# **APPENDIX 2: TITHE APPORTIONMENT DATA**

Field		Fi	eld Siz	2e <sup>1</sup>					
Number	Field Name	Α	R	Р	Field Use	Owner			
St Bees (En	St Bees (Ennerdale), Tithe Map and Tithe Award, 1844-1845								
33	Moss	6	0	35	Pasture	Bridget Bragg			
36	Low Field	3	0	29	Arable	Sarah Cuthbertson			
37	Far Meadow	2	2	3	Arable	William Towerson			
38	Rough Close	3	2	12	Arable and Meadow	William Towerson			
42	Meadow	3	0	35	Meadow	William Towerson			
43	Honey Pot	2	1	18	Pasture	William Towerson			
77	Paredfield	5	1	5	Arable	Sarah Cuthbertson			
78	Rough Meadow	5	2	39	Meadow and Arable	Sarah Cuthbertson			
79	Black Ground	5	2	11	Meadow and Arable	Sarah Cuthbertson			
82	Hoghouse Field	3	1	27	Arable and Pasture	Bridget Bragg			
88	Far Hoghouse Close	0	3	9	Wood and Pasture	Bridget Bragg			
89	Hellyeat? Close	4	1	36	Arable and Pasture	John Filey			
90	Back of Beck	4	2	3	Arable and Pasture	John ?agan			
92	Back of Beck	3	1	26	Arable	John Shepherd			
93	Nam?y Cau? Gap	2	3	30	Arable	John Shepherd			
95	Rough Field	3	1	0	Pasture	John Shepherd			
97	Far Meadow	6	2	25	Meadow	John Dabzell?			
98	Awdsykes?	5	1	21	Arable and Meadow	John Dabzell?			
99	Brays	4	2	2	Arable and Meadow	John Dabzell?			
100	Bird Crook	4	2	36	Arable and Meadow	John Dabzell?			
103	Croft Meadow	5	0	23	Meadow and Arable	John Dabzell?			
487	High Rough Field	3	2	14	Arable and Meadow	Bridget Bragg			
St Bees (Kin	niside), Tithe Map and Tith	e Awa	rd, 184	4		J			
27	Gillhouse Stead	2	0	14	Arable	Thomas Pasonby?			
28	Butt	3	3	23	Arable	Thomas Pasonby?			
29	Low Toad?hole Bank	3	1	18	Arable	Thomas Pasonby?			
170	Potts Meadow	10	13	17	Meadow	Antony Dixon			
191	Black Close	1	1	0	Arable	Henry Steel			
196	Outga?g	0	2	29	Pasture	Henry Steel			
265	Flatts	1	1	0	Meadow	William Lowerson			
266	Round Close	3	0	37	Arable	William Lowerson			

Field		Fi	eld Siz	ze1				
Number	Field Name	Α	R	Р	Field Use	Owner		
267	Middle Lowfield	4	0	18	Arable	William Lowerson		
268	Brackenwreay	4	1	0	Arable	William Lowerson		
269	Back O' Beck	2	2	19	Arable	Thomas Pasonby?		
271	Meadow	5	1	9	Meadow	Thomas Pasonby?		
281	Low Potts	3	0	33	Pasture	John Robinson		
284	Little Moor Ing	5	0	21	Arable	Richard Whiteside		
311	High Moor Ing	4	1	0	Arable	Richard Whiteside		
320	Long Moor Ing	3	1	6	Arable	Richard Whiteside		
321	Far Moor Ing	4	0	21	Arable	Richard Whiteside		
322	Near Moor Gap	4	0	0	Arable	John Hutchinson		
323	Far Moor Gap	3	0	0	Arable	John Hutchinson		
324	Far Moor Ing	2	1	30	Arable	Joseph Jumpton		
325	Near Moor Ing	2	1	2	Arable	Joseph Jumpton		
349	Great Meadow	4	1	25	Meadow	John Hunter		
350	Far Meadow	3	1	3	Meadow	John Hunter		
389	Busky Dale	2	2	2	Arable	Joseph Jumpton		
390	Great Meadow	2	2	10	Meadow	?		
391	Black Lands	4	0	14	Arable	Joseph Jumpton		
393	Boon House	1	3	12	Arable	?		
394	Gill Head	3	0	17	Arable	Joseph Jumpton		
407	Ridding	7	0	26	Arable	Henry Steel		
408	Black Lands	3	2	32	Arable	Antony Dixon		
410	Coppsters?	4	0	19	Arable	Antony Dixon		
426	Long Meadow	5	2	38	Arable	Antony Dixon		
433	? the Riggs	1	1	9	Arable	Antony Dixon		
440	? Field	2	0	8	Arable	John Dixon		
441	Meadow	1	3	24	Meadow	John Dixon		
Cleator (Dint Common Enclosure), Enclosure Award, 1825								
65	-	48	1	0	-	Earl of Egremont		
69	-	19	2	16	-	John Birley		
70	-	3	3	27	-	Abraham Little		
Cleator, Ti	the Map and Tithe Award, 1	839-184	41		·	,		
254	Fell Meadow, part of	5	2	14	Meadow	Lindow Jones (Jonas)		
255	How, part of	5	0	2	Arable	Lindow Jones (Jonas)		

Field	Field		Field Size <sup>1</sup>			
Number	Field Name	Α	R	Р	Field Use	Owner
256	Dixon Croft, part of	6	1	35	Arable	Lindow Jones (Jonas)
257	Roe Head Croft, part of	3	2	20	Arable	Lindow Jones (Jonas)
264	Wath Acre	5	2	0	Arable	Lindow Jones (Jonas)
265	Adam Lands	9	3	20	Arable	Lindow Jones (Jonas)
266	Stony Dale	4	0	24	Arable	Lindow Jones (Jonas)
267	High Meadow	3	0	18	Meadow	Lindow Jones (Jonas)
268	Fell Field, part of	6	3	9	Arable	Lindow Jones (Jonas)
269	High Kiln How	7	0	10	Arable	Lindow Jones (Jonas)
270	Low Kiln How	5	0	26	Arable	Lindow Jones (Jonas)
St John Bec	kermet (Briscoe), Tithe Map	and T	ithe Au	vard, 1	840	]
9	?	4	0	?	?	?
10	Bell Butts	6	0	17	Arable and Pasture	?
20	Low Field	1	2	21	Arable	Egremont Poor
21	High Field	1	2	7	Arable	Egremont Poor
22	Common Field	1	2	7	Arable	Egremont Poor
28	Low Braithwaite	2	3	26	Arable	?
29	High Braithwaite	2	3	31	Arable	Henry Couks?
59	Far Bank	2	1	5	Arable	James Williams
60	Common Field	0	3	31	Arable	James Williams
63	Far Bank	2	1	2	Arable	John Fisher Sherw?n
67	Meadow	2	3	14	Meadow	John Fisher Sherw?n
68	Common Field	3	2	5	Arable	John Fisher Sherw?n
73	Middle Bank	2	3	34	Arable	John Fisher Sherw?n
76	Great Rigg Close	2	2	39	Arable	John Fisher Sherw?n
85	Binslay Bank	4	1	6	Arable	William Nicholson
87	Low Common Field	4	2	37	Arable	William Nicholson
204	Kiln Close	4	0	0	Arable	Richard Whiteside
204a	Kiln Close Plantation	0	0	7	Wood	Richard Whiteside
209	Far Yeat Field	7	1	21	Arable	Thomas Hartley Esq.
224	Colebank Field	1	3	31	Arable	Wilson Fisher
225	Colebank Field	1	2	36	Arable	Wilson Fisher
226	Colebank Field	4	0	6	Arable	Wilson Fisher
228	Millimoor High	1	3	30	Arable	John and ? Wood
229	Millimoor Low	2	0	17	Arable	?

Field		Fi	eld Siz	2e <sup>1</sup>		
Number	Field Name	Α	R	Р	Field Use	Owner
234	?	3	3	37	Arable	?
235	Long Field	3	1	24	Arable	Peter ? Sherw?n
239	Low Briscoe	1	3	22	Arable	?
Egremont,	Fithe Map and Tithe Award,	1841-2	1842	1		
15	Gully Flatt	3	2	5	Arable	Rev. John Gaitskill
17	Wylie Close	3	0	0	Arable	Rev. John Gaitskill
19	Near Green Whins	3	2	17	Arable	Rev. John Gaitskill
20	Hollow Field	2	2	31	Arable	Rev. John Gaitskill
21	Far Green Whins	3	2	28	Arable	Rev. John Gaitskill
22	Black Ling	9	0	31	Arable and Pasture	Rev. John Gaitskill
23	Lang Lauds	4	0	14	Arable	Rev. John Gaitskill
24	Little Corft	3	2	25	Arable	Rev. John Gaitskill
26	Red Gate Field	4	0	12	Arable	Rev. John Gaitskill
40	High Close	1	2	38	Arable	Cathrine Johnson
41	High Close	0	3	3	Arable	Cathrine Johnson
42	High Close	0	3	16	Arable	Cathrine Johnson
43	High Close	1	0	37	Arable	Cathrine Johnson
44	Croft	2	2	16	Arable	Cathrine Johnson
49	Near Sandy Flatt	1	2	36	Arable and Road	Cathrine Johnson
52	Far Browmack	9	2	10	Arable	Edward Steel
53	High Browmack	4	2	7	Arable	Edward Steel
54	Middle Browmack	4	2	37	Arable	Edward Steel
55	Common Browmack	2	3	21	Arable	Edward Steel
58	Sandy Flatt	11	0	23	Arable	Antony Dixon
88	Backside of Sandy Flatt	1	3	8	Arable	Antony Dixon
94	Sandy Flatt	4	4	36	Arable and Pasture	?
99	Low Croft	4	3	23	Arable	Antony Dixon
100	Intack?	0	3	5	Arable	Antony Dixon
St Bees (Lo	wside Quarter, Tithe Map a	nd Tith	ie Awa	rd, 183	38)	
598	Croft	6	2	37	Arable	Mary Dickenson
601	Lane Croft	4	3	24	Arable	Mary Dickenson
602	Green Croft	3	1	27	Arable	Mary Dickenson
606	Near Hanging Bank	6	1	8	Arable?	Frances Smith
607	Mire Field	2	3	12	Arable	Frances Smith

Field		Field Size <sup>1</sup>				
Number	Field Name	Α	R	Р	Field Use	Owner
643	High Cow? Pasture	1	3	2	Arable	Rev. John Gaitskill
648	High Well Park	3	3	20	Arable	Rev. John Gaitskill
649	Middle Well Park	4	2	21	Arable	Rev. John Gaitskill
653	Far Croft	4	2	38	Arable	Rev. John Gaitskill
666	Low Casson Park	3	1	13	Arable	Henry Atkinson
687	Keld Park or Mill Filed	7	1	26	Arable	Joseph Harriman (Infant)
689	Quarry? Field	10	0	32	Arable	Joseph Harriman (Infant)

<sup>1</sup> A, Acre; R, rood; P, perch

# **APPENDIX 3: FIGURES**

# **APPENDIX 4: PLATES**



Plate 1: Fields 269 (High Kiln How) and 270 (Low Kiln How) in Cleator parish and fields 204 (Kiln Close) and 204a (Kiln Close Plantation) in St John Beckermet (Briscoe) parish



Plate 2: Kinninside Mine as on the Second Edition Ordnance Survey (1899c)



Plate 3: Development of the area south of Egremont, First Edition Ordnance Survey 1865h



Plate 4: Development of the area south of Egremont, Third Edition Ordnance Survey 1926d



Plate 5: Aerial photo of the Cleator Moor Dyke (Site 33), facing southeast



Plate 6: Established field boundary at NY 051 154, facing west, scale 1m



Plate 7: River erosion at NY 074 152 showing soil sequence, slightly acid loamy soils (Wick 1 Association) over an intermixed silt, course sand and cobble layer of a colluvial nature, facing east, scale 1m



Plate 8: Drainage works at NY 061 155 showing a silty topsoil (c.0.2m thick) over a light brown clay sand (c.0.1m thick) which in turn overlies a rich dark peat-like layer with extensive small remains of branches and wood, facing north



Plate 9: Area of railway junction at NY 012 095 between the L & NW & Furness Joint Railway (Site 9) and a branch line to Florence Mine (Site **30**), facing south



Plate 10: Winding engine at Florence Mine (Site **30**), facing southeast



Plate 11: Site 66 at NY 01740 13385



Plate 12: Site 67 at NY 02137 13350



*Plate 13: Site 68 at NY 02400 13700* 



Plate 14: Site 69 at NY 05630 15290



Plate 15: Site **70** at NY 06645 15158



Plate 16: Site **71** at NY 06605 15170



Plate 17: Site 72 at NY 06912 15295



Plate 18: Site **73** at NY 07362 15138



Plate 19: Position of level (red circle) outside the known extent of the Kinniside Mine (Banks et al 1994, 214)

# APPENDIX 5: SPECIFICATION

## BRIEF FOR A DESK-BASED ASSESSMENT & WALKOVER SURVEY

# ON THE PROPOSED PIPELINE ROUTE BETWEEN

## SOUTH EGREMONT AND ENNERDALE, CUMBRIA

Issued by the

## **County Historic Environment Service**

**Environment Unit** 



## Date of Brief: 15 April 2011

This Design Brief is only valid for 1 year after the above date. After this period the County Historic Environment Service should be contacted. Any specification resulting from this Brief will only be considered for the same period.

## SITE DESCRIPTION AND SPECIFICATION

Site: Between south Egremont and Ennerdale

Grid Reference: from NY 0040 0850 to NY 0855 1531

Scope of Development: 16km long pipeline

- 1.1 Detailed specifications and tenders are invited from appropriately resourced, qualified and experienced archaeological contractors to undertake the archaeological project outlined by this Brief and to produce a report on that work. The work should be under the direct management of either an Associate or Member of the Institute for Archaeologists, or equivalent, and any response to this Brief should follow IFA Standard and Guidance for Archaeological Desk-Based Assessment 2008 and be in line with recommendations outlined in English Heritage (1991). The specification must include:
  - A description of the methodology to be employed
  - A description of the report that will be produced
  - Details of key project staff, including the names of the project manager, supervisor and any other specialist sub-contractors to be employed
  - A projected timetable for all work including the production of the report
- 1.2 Any significant variations to the specification must be agreed by the County Historic Environment Service (CCCHES) in advance and no archaeological work should commence until the specification has been approved by CCCHES.

## PLANNING BACKGROUND

2.1 CCCHES and the Lake District National Park Authority (LDNPA) have been consulted by United Utilities regarding a construction of a 16km long pipeline between Egremont and Ennerdale.

2.2 Further information concerning the location, extent, survival and significance of the known archaeological remains on the site, as well as the potential for unknown archaeological remains to survive, is required. This Design Brief sets out the standards for an archaeological desk-top assessment and walkover survey. Further archaeological work may be necessary, depending upon the results of the assessment and survey, to determine the nature and extent of the below ground survival of archaeological remains and/or to record any archaeological remains that will be disturbed by the proposed pipeline. Any further archaeological work will require the production of a separate Design Brief.

2.3 This advice is given in accordance with the advice of the Code of Practice on Conservation, Access and Recreation 2000.

## ARCHAEOLOGICAL BACKGROUND

- 3.1 Occasional flint implements (e.g. Bronze Age scrapers HER 6471 & 6472) found in close vicinity to the proposed pipeline route attest to prehistoric activity in the area and the pipeline crosses what is believed to be the course of a Roman road (HER no. 1255).
- 3.2 During the 18<sup>th</sup> to 20<sup>th</sup> centuries the River Ehen became an intensive focus for industry. The proposed route affects the sites of Florence (HER no. 12339) and Hardheads Mines (HER no. 16592), Little Mill millrace (HER no. 12328), and the course of the L & NW & Furness railway (HER no. 12215). It also lies in close proximity to the site of Kinniside lead mine (LD HER no. 16825).

## SCOPE OF THE PROJECT

Objectives

- 4.1 To collate and assess existing information about the archaeology of the site and to determine as fully as possible from the available evidence the nature, survival, quality, extent and importance of any archaeological remains within the development area.
- 4.2 To provide a detailed assessment of areas of archaeological potential and survival based on the above research and assess the potential for the use of particular investigative techniques in order to aid the formulation of any necessary mitigation strategy, including further evaluation, excavation, building recording and/or preservation of archaeological remains.

4.3 To assess the potential state of preservation for any archaeological deposits that may exist on the site, and where possible to model those deposits.

4.4 To assess the extent of any ground disturbance associated with any previous intrusive development.

4.5 To identify any remains of potential archaeological significance surviving above ground within the working easement of the proposed pipeline.

### Work Required

4.6 Desk-Based Assessment:

The desk-based assessment should include the following work:

- A reassessment of the available aerial photographic evidence and, where relevant, a replotting of appropriate archaeological and topographical information by a suitably qualified specialist.
- Collation and assessment of any relevant information held in the County's and the LDNPA's Historic Environment Records

to identify important sites to assess the potential of known sites

- Assessment of relevant published sources including articles in national, regional and local journals. A useful directory of the major archive, museum and library collections in Cumbria can be found in Winstanley & David (2006).
- Assessment of relevant unpublished documents including, where appropriate, reports compiled by heritage conservation professionals and students theses.
- Collation and assessment of all cartographic information relevant to the area.

to identify historic land use to provide an assessment of the potential extent of disturbance to the archaeological resource caused by intrusive features

Assessment of the topography and landuse of the area through maps and site visits.

to assess the archaeological potential of areas not identified through the County and Lake District National Park Historic Environment Records

- Provision of a detailed assessment of areas of archaeological potential and survival based on the above research.
- 4.7 Walkover Survey:
  - A walkover survey of the of the pipeline route should be undertaken encompassing the proposed working easement as a minimum
  - The survey should adhere to the requirements of a Level 1 Survey, as described by English Heritage (2007)
  - Any surface features of potential archaeological interest should be recorded together with areas of potentially significant recent disturbance, and hazards and constraints to undertaking further archaeological work on site (including the siting of live services, Tree Preservation Orders and public footpaths).

Reporting:

- 4.8 The archaeological work must result in a report, which should include as a minimum:
  - A site location plan, related to the national grid
  - A front cover/frontispiece which includes the planning application number and the national grid reference of the site
  - ✤ A concise, non-technical summary of the results
  - The dates on which the project was undertaken
  - A description of the methodology employed, work undertaken and the results obtained
  - Plans at an appropriate scale and related to the national grid showing any features of archaeological significance identified in the desk-based assessment and walkover survey
  - A discussion of the archaeological implications of the proposed development, identifying areas of greatest archaeological potential within the development site [and areas where this is at greatest risk in terms of the development proposals]
  - Clear identification of any hazards to undertaking further archaeological work on site
  - Recommendations for further archaeological [assessment or mitigation] work.
- 4.9 Two copies of the report should be deposited with CCCHES and a further 2 copies sent to the LDNPA within two months of completion of fieldwork. This will be on the understanding that the report will be made available as a public document through the HERs.

Publication

- 4.10 Should further archaeological work result from the desk-based assessment, the results may need to be made available for inclusion in a summary report to a suitable regional or national archaeological publication.
- 4.11 Cumbria and LDNPA HERs are taking part in the Online Access to Index of Archaeological Investigations (OASIS) project. The online OASIS form at <u>http://www.oasis.ac.uk/</u> must therefore also be completed as part of the project. Information on projects undertaken in Cumbria will be made available through the above website, unless otherwise agreed.

Archive

4.12 Any archive that is generated from this work must be prepared in accordance with the recommendations in Brown (2007). Arrangements must be made for its long term storage and deposition with an appropriate repository.

4.13 CCCHES and LDNPA must be notified of the arrangements made.

## **PROJECT MONITORING**

5.1 One weeks notice must be given to CCCHES prior to the commencement of the project.

### FURTHER REQUIREMENTS

- 6.1 It is the archaeological contractor's responsibility to establish safe working practices in terms of current health and safety legislation, to ensure site access and to obtain notification of hazards (e.g. services, contaminated ground, etc.). The County Historic Environment Service bears no responsibility for the inclusion or exclusion of such information within this Brief or subsequent specification.
- 6.2 The Institute for Archaeologists' The Code of Conduct (2009) must be followed.

### BIBLIOGRAPHY

Brown, DH, 2007 Archaeological Archives A Guide To Best Practice In Creation, Compilation, Transfer and Curation, Archaeological Archives Forum

English Heritage, 1991 The Management of Archaeological Projects, 2<sup>nd</sup> ed, Swindon

English Heritage, 2007 Understanding the Archaeology of Landscapes A Guide to Good Recording Practice, Swindon

Institute for Archaeologists, 2008 Standard and Guidance for Archaeological Desk-Based Assessment, Reading

Institute for Archaeologists, 2009 By Laws: Code of Conduct, Reading

Winstanley, M & David, R, 2006, A Guide to Cumbrian Historical Sources, Lancaster University

## FURTHER INFORMATION

For further information regarding this Brief, contact

Jeremy Parsons Historic Environment Officer Cumbria County Council County Offices Kendal Cumbria LA9 4RQ Tel: 01539 713431 Email: Jeremy.Parsons@cumbriacc.gov.uk



Figure 1: Site location



wardell armstrong archaeology	PROJECT:	South Egremont Pipeline, Cumbria	KEY:	Location of heritage sites Proposed route of pipeline 200m search area	
	SCALE:	1:25,000 at A3			
	REPORT No:	CP10234			
	CLIENT	United Utilities			
WA Archaeology Ltd	DRAWN BY:	AB		Lake District boundary	Reproduced by permission of Ordnance Survey on behalf
2012	DATE:	June 2012			of The Controller of Her Majesty's Stationery Office. © Crown copyright. All rights reserved. Licence number 100019512.
	FIGURE:	2			

Figure 2: Location of Heritage Assets, western aspect of pipe route



Figure 3: Location of Heritage Assets, eastern aspect of pipe route

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wardell archaeology WA Archaeology Ltd 2012
South Egremont Pipeline, Cumbria
CLIENT: United Utilities
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DATE: June 2012
KEY: Location of heritage sites Proposed route of pipeline 200m search area Lake District boundary
Reproduced by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright. All rights reserved. Licence number 100019512. REPORT No:
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Figure 4: Historic Landscape Characterisation Types along pipe route

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	SCALE: 1:30,000 at A3 DRAWN BY: AB
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Figure 5: Sites affected by the pipe route and their extents

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	date: June 2012
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Figure 6: Areas of recommended archaeological investigation

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		KEY:       Proposed route of pipeline         200m search area       Lake District boundary         Lake District boundary       Areas subject to geophysical survey         Areas subject to geophysical survey       Area subject to watching brief         Area subject to watching brief       Area subject to watching brief         Image: Survey of the Controller of Her Majesty's Stationery Office.       © Crown copyright. All rights reserved.         Licence number 100019512.       Image: Survey on Surve
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		KEY:       Proposed route of pipeline         200m search area         Lake District boundary         Known extent of site         Areas subject to geophysical survey         Area subject to watching brief
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Figure 7: Location of assets recorded during walkover survey, situated in central area of study site

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	wardell armstrong archaeology WA Archaeology Ltd 2012
	South Egremont Pipeline, Cumbria
	CLIENT: United Utilities
	SCALE: 1:7,500 at A3 DRAWN BY: AB
	DATE: June 2012 KEY: Proposed route of pipeline
6	200m search area
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	REPORT No: CP10234
	FIGURE:



Figure 8: Location of assets recorded during walkover survey, situated in north-eastern area of study site

	wardell archaeology WA Archaeology Ltd 2012
	South Egremont Pipeline, Cumbria
	CLIENT: United Utilities
	SCALE: 1:7,500 at A3
	DRAWN BY: AB
	DATE: June 2012
X	KEY:
	<ul> <li>Proposed route of pipeline</li> <li>200m search area</li> <li>Lake District boundary</li> <li>Recorded sites</li> </ul>
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	REPORT No: CP10234
	FIGURE:
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