



**COMMUNITY-BASED
ARCHAEOLOGICAL
LANDSCAPE SURVEY
FINAL REPORT**

**GREAT ASBY SCAR,
WESTMORLAND DALES,
YORKSHIRE DALES NATIONAL
PARK**

prepared for

Westmorland Dales
Landscape Partnership

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GREAT ASBY SCAR, WESTMORLAND DALES, CUMBRIA
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TABLE OF CONTENTS

Summary		
1.0	Introduction	10
2.0	Methodology	13
3.0	Background information	17
4.0	Archaeological and historical background	21
5.0	Results	33
6.0	Conditions assessment	109
7.0	Recommendations for further work	110
8.0	Conclusion	111
References		114
Appendix A: Known HER sites		119
Appendix B: Previously known sites from DBA and taster days		127
Appendix C: Site gazetteer		133

LIST OF FIGURES

- Figure 1: survey location.
- Figure 2: survey zones by priority
- Figure 3: Historic Environment Record sites.
- Figure 4: project boundary and 1859 parish boundaries.
- Figure 5: survey area overlaid onto 1863 Ordnance Survey map.
- Figure 6: copy of 1777 enclosure award, drawn by Jan Hicks.
- Figure 7: survey area overlaid onto 1899 Ordnance Survey map.
- Figure 8: survey area overlaid onto 1920 Ordnance Survey map.
- Figure 9: survey sites recorded.
- Figure 10: sites in Zone A by type.
- Figure 11: sites in Zone B by type.
- Figure 12: sites in Zone C by type.
- Figure 13: sites in Zone D by type.

Figure 14: sites in Zone G by type.
Figure 15: sites in Zone H by type.
Figure 16: sites in Zone I by type.
Figure 17: sites in Zone J by type.
Figure 18: sites in Zone K by type.
Figure 19: sites in Zone L by type.
Figure 20: sites in Zone M by type.
Figure 21: sites in Zone N by type.
Figure 22: sites in Zone A by period.
Figure 23: sites in Zone B by period.
Figure 24: sites in Zone C by period.
Figure 25: sites in Zone D by period.
Figure 26: sites in Zone G by period.
Figure 27: sites in Zone H by period.
Figure 28: sites in Zone I by period.
Figure 29: sites in Zone J by period.
Figure 30: sites in Zone K by period.
Figure 31: sites in Zone L by period.
Figure 32: sites in Zone M by period.
Figure 33: sites in Zone N by period.
Figure 34: all known sites on Great Asby Scar.

LIST OF PLATES

Plate 1: volunteers marking out an earthwork.
Plate 2: plan of Roman roads, RCHME Survey (Curwen 1936).
Plate 3: hut circle **L439** (looking west).
Plate 4: cairnfield **B122**.
Plate 5: clearance cairn **C92** is now a very low mound with only a few stones visible.
Plate 6: burial mound **M401** (looking north). The ranging rods are placed beside the surrounding bank and ditch.
Plate 7: burial mound **L431** (looking west).
Plate 8: burial mound **C69** (looking west).
Plate 9: burial mound **B119** looking toward Lunesdale to the south from cairnfield **B122**.
Plate 10: the largest enclosure of the settlement **H517**, built primarily of orthostats with some flat-lying stones.

Plate 11: structure built of orthostats within the settlement **H517**.

Plate 12: one of the enclosures of settlement **H306** (looking north-west).

Plate 13: the only appearance of orthostats, albeit somewhat fallen, is in this linear corridor between enclosures of **H306**.

Plate 14: domestic dwelling of the sheiling **D13** on the Knott.

Plate 15: earthworks of a possible sheiling (**B149**) built up against the limestone pavement. Photo is looking south.

Plate 16: site **B176** (looking south-west). The structure is composed of two circular cells built against the limestone pavement.

Plate 17: possible sheiling **B142** looking south toward Lunesdale.

Plate 18: structure **M404** with the wall **M403** to the rear (north).

Plate 19: volunteers surveying enclosure **N677**.

Plate 20: view of the quarryman's hut **K620** looking towards quarry **K619**.

Plate 21: shelter **D59** (looking west). The shelter is three-sided, built of rubble.

Plate 22: shelter **H530** built on the limestone pavement.

Plate 23: view down the long axis of the possible longhouse looking south-east.

Plate 24: **M410** is a sub-rectangular earthwork with a rubble centre, perhaps from the structure's collapse.

Plate 25: structure **M410** (looking south).

Plate 26: wall **G333** (looking north-east).

Plate 27: possible prehistoric boundary wall **D33** stretching north-east up to the crest of the hill.

Plate 28: boundary bank **D109** (looking south downhill).

Plate 29: boundary bank **G351** forms a slightly sinuous, stone-based wall stretching north of the boundary wall from which the photo was taken

Plate 30: boundary stones **G328** extend up the hill to the south-west.

Plate 31: cairn **N682**, the only remaining parish marker cairn.

Plate 32: 'thunderstone' **D20** located next to track **D21**.

Plate 33: wall **310** running along track **311**. Wall runs 10m along track and runs north (toward the rear of the photo) for c.30m.

Plate 34: wall **I295** – looking south from quarry **I296**.

Plate 35: wall **H308** runs north-east-south-west across Tympany Gill.

Plate 36: mound **J239** (looking south). The mound lies on one side of a drainage gully.

Plate 37: bank **H561** may have been built to contain the pond. Plate 38: Revetment **I302** (looking south).

Plate 39: wall **D53** – looking south down the length of the wall. The wall is formed of large stones on the exterior of the wall with rubble infill.

Plate 40: wall **H503** may represent a former enclosure wall running parallel to the west wall of Zone H.

Plate 41: gate **I278** retains both of its stone stoups and appears to still be in use.

Plate 42: hogg hole **C73** is still in use. The stone slab has been set aside to let the yearlings through.

Plate 43: smoot **L429** – looking south from the road to Great Asby.

Plate 44: step stile **J196** with the edge of gate **J184** visible in the far left of the photo.

Plate 45: south side of the revetment and culvert **M422**.

Plate 46: drainage ditch **K669** – looking west, uphill toward quarry **K670** (just out of view).

Plate 47: drainage ditch **K373** – looking east away from quarry **K372** toward Tympany Gill.

Plate 48: sheepfold **N703** is visible on the First Edition (1863) map but is no longer in good condition.

Plate 49: the west side of Pickering Close (**N705**) with the gate (**N706**) visible.

Plate 50: enclosure **B178** – looking north-west along the limestone outcrop.

Plate 51: wall **B169** running between outcrops.

Plate 52: wall **D17** runs south down from the Knott, past a small limestone outcrop and fades into the grass below.

Plate 53: enclosure **G331** is formed by a low rubble earthwork largely consisting of boulders.

Plate 54: two sides of the hexagonal enclosure **G321**.

Plate 55: the south enclosure wall of site **L482**.

Plate 56: the possible entrance to site **L482** is marked by a 3m gap in the wall beside a structure to the west (right).

Plate 57: sheepfold **A255** (looking north-east).

Plate 58: sheepfold **H307** is the only free-standing sheepfold.

Plate 59: bield **A271** – looking south-east from the rectangular structure in the foreground to the Y-shaped fork in the wall in the background.

Plate 60: bield **D14** (looking west).

Plate 61: clearance cairn **G352** (looking north-east). It is located at the bottom of a gully.

Plate 62: cairn **H558** was built around the existing erratic.

Plate 63: cairn **G363** is part of a larger cairnfield with cairn **G362** visible to the north (rear).

Plate 64: a series of quarries, **D72**, line the wall and were used for its construction.

Plate 65: quarry **K456** is cut at right angles, with a spoil heap to the south-east (right).

Plate 66: looking from quarry **L436**, is a wide ramp (**L435**) across the limestone.

Plate 67: platform **K451** located within the spoil heaps of quarry **K452**.

Plate 68: quarry **N712** with the marker stone on its left (north) side

Plate 69: marker stone of quarry **N712** with holes cut in both stones.

Plate 70: quarry **M424** – looking north toward the road to Great Asby which can be seen in the distance on the left.

Plate 71: quarry **K672** looking over the quarried outcrop toward upcast bank that surrounds it.

Plate 72: platform at **K372**, one of the quarries at Andrew's Scar.

Plate 73: quarry **C84** – looking east from the entrance.

Plate 74: quarry **K613** cut into the limestone outcrop.

Plate 75: quarry **K617** is similarly cut to **K613** and **A587**.

Plate 76: quarry **A587** is a large cut into one of the crags of Little Kinmond.

Plate 77: the north sow kiln **K370** (looking west).

Plate 78: this quarry pit is one of the many pits, faces, and spoil heaps of quarry **D1**.

Plate 79: lime Kiln **J241** is built into the hillside of quarry **J240** and opens to the west.

Plate 80: large spoil heaps of small stones found in quarry **D54**.

Plate 81: a narrow corridor of stone was cut into the stone at **G360**.

Plate 82: pile of rockery stones left behind at quarry **G360**.

Plate 83: volunteers measuring the spoil heaps of **N690**.

Plate 84: adit **K606** located at the end of hollow way **K605**.

Plate 85: small adit at **K643**.

Plate 86: bell pit at **K643E**.

Plate 87: volunteers standing beside bell pits **K643I**, **K643J**, **K643K**, and **K643L** as seen from bell pit **K643G**.

Plate 88: rubble-filled circular earthwork of **J193**.

Plate 89: volunteers standing on feature **J189**.

Plate 90: peat cutting **N685** (looking south).

Plate 91: track **G356** is visibly cut into the hillside.

Plate 92: track **B157** is visibly cut into the limestone pavement.

Plate 93: one of the series of hollow ways **B164** (looking south).

Plate 94: track **H537** running along the edge of surface quarry **H529**.

Plate 95: path **C98** cut through the limestone pavement.

Plate 96: stones placed on top of a grike at site **J215** to prevent falling in.

Plate 97: the 'four stones' of **M394**

Plate 98: cairn **M421** is located on a prominent knoll and very visible from track **M423**.

Plate 99: cairn **J186** built on top of Cowman's Scar and very visible.

Plate 100: waymarker stones **G333** flanking both sides of a possible historic routeway.

Plate 101: stone **L483** stands very prominent in the corner of enclosure **L482**.

Plate 102: stone **J259**, although small, still appeared to be wedged into the grike.

Plate 103: stone setting **K662** had a very distinctive shape.

Plate 104: stone **B167** appears to be propped up by the stoned within the grikes.

Plate 105: stone E of area **I303**.

Plate 106: spring **D46** and its stone trough (looking south).

Plate 107: salt lick **C79** (looking south).

Plate 108: trigonometric column **D61** (looking south-east). Plate 109: benchmark located at the foot of stile **G326**.

Summary

Northern Archaeological Associates Ltd was commissioned by the Westmorland Dales Landscape Partnership to undertake a community-based archaeological landscape survey at Great Asby Scar in Westmorland, Cumbria. This was one of a number of cultural heritage projects undertaken as part of the four-year Westmorland Dales Landscape Partnership Scheme, aimed at unlocking and revealing the hidden heritage of the Westmorland Dales. The survey area covered 5.72km² of predominantly limestone pavement, split into 12 zones. This formed part of a larger 11km² study area (divided into 21 zones) which had previously been assessed by NAA as part of an earlier desk-based assessment which informed the project design. The remaining nine zones have, or will be, surveyed by members from the Lunesdale Archaeology Society (LAS), working together with volunteers trained as part of the project.

The survey was designed to take six weeks, originally planned as two three-week seasons. The first took place at the end of September and early October 2019, and the second in March 2020 but it was interrupted by the global Coronavirus pandemic. As a result, the final survey week was postponed until September 2020 (referred to as Season 3). In total, 33 volunteers took part across the three seasons, many attending for several days. The in-depth local knowledge they brought to the project, coupled with a rigorous recording methodology introduced by the NAA archaeologists, demonstrated the benefit of community surveys like this in the advancement of landscape studies, identifying 699 largely new sites across the survey area.

Great Asby Scar is a wide expanse of moorland and limestone pavement between Orton and Great Asby in Cumbria. Evidence of human activity on the Scar dates back to the Late Neolithic or Bronze Age with a series of burial cairns recorded on the north and south slopes, as well as evidence of field clearance potentially related to settlement. In the Iron Age and Romano-British period, enclosed settlements were founded on the north flanks of the Scar, which showed extensive signs of habitation. In the medieval period, the Scar was common upland split between the parishes of Great Asby, Crosby Ravensworth and Orton, and used primarily as pastureland for the livestock. Several sheilings (temporary summer camps) were recorded associated with this period, with associated livestock enclosures.

The encroachment and intake of land along the periphery of the common probably began in the medieval period, escalating over the following centuries to culminate in the mid-19th century. The enclosure process had a significant impact on the landscape of the Scar over time with the erection of countless drystone walls and, latterly, the setting out of the upland into geometric land parcels. The construction of the parliamentary enclosure walls required large quantities of

stone which was extracted locally. Numerous quarries were recorded as part of the survey, many of which were located immediately adjacent to drystone walls. Stone was also quarried to be burnt to produce quicklime used as fertiliser to improve agricultural production. Two stone lime kilns, and at least one earlier sow kiln were identified as part of the survey.

In addition to quarrying, other evidence of industrial activity included two copper-mine sites, identified on the northern slopes of the Scar. These dated to the late 18th and mid-19th centuries and included evidence of two adits and related earthworks. Several bell pits were recorded, some of which may be trial works pre-dating the two mines. Turf cutting was also an important industry with three potential turbary sites found on the Scar.

Perhaps one of the most interesting and enigmatic of the sites identified were 65 'stone settings' found across the survey area. These were thin stones slabs set upright into limestone crevices called grikes. Similar stones are known from across Britain and Ireland and are believed to be Neolithic to Bronze Age in date, forming part of the wider prehistoric ritual landscape. The Great Asby stones are a regional variation, identified across the limestone plateau in Yorkshire and the Westmorland Dales. They compare closely with similar 'miniliths' found at Ingleborough that have been the subject of research conducted by Dr. David Johnson as part of the Stories in Stone project. However, what is particularly important about the Great Asby stones is the large number in which they occur in a relatively limited area. This might suggest that the Scar held a particular ritual significance to the surrounding prehistoric communities.

Overall, the Great Asby Scar community landscape survey project has clearly demonstrated both the richness of the Great Asby Scar archaeological resource and the value of intensive walkover surveys of this kind. However, there remain key areas requiring further research and archaeological investigation. In particular, further detailed survey and archaeological investigation of the Romano-British settlements near Tympany Gill, as well as some of the larger sheilings sites on the upland. The complex mining sites found near Andrew's Scar would also benefit from further investigation, as would the possible longhouse in Zone B, and the stone settings found across the landscape.

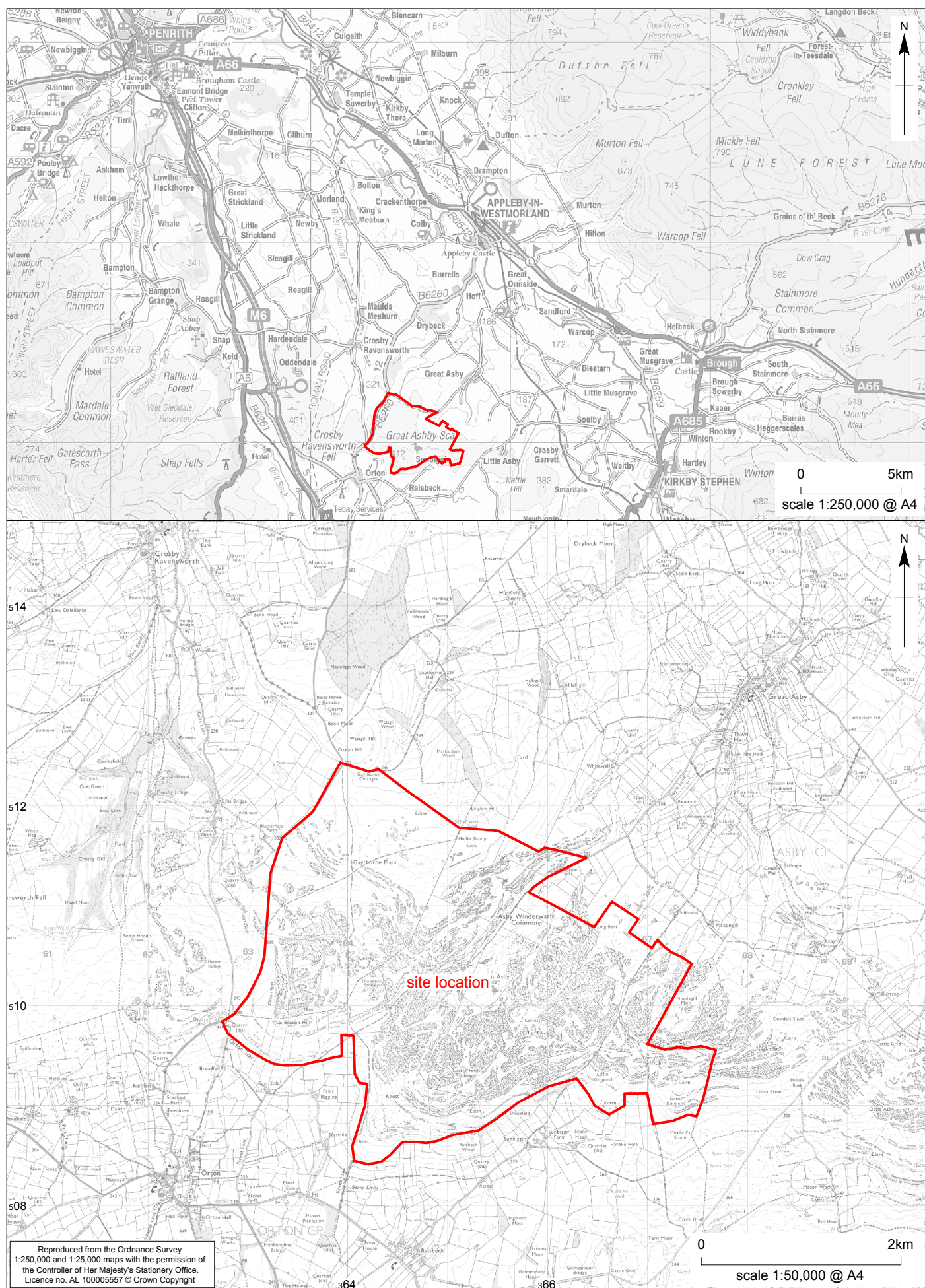
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1.0 INTRODUCTION

- 1.1 Northern Archaeological Associates Ltd (NAA) was commissioned by the Westmorland Dales Landscape Partnership (WDLP) to undertake a community-based archaeological landscape survey at Great Asby Scar, Westmorland in Cumbria (NGR: NY 65365 10213; Fig. 1). The survey was one of a number of cultural heritage projects undertaken as part of the four-year Westmorland Dales Landscape Partnership Scheme, aimed at unlocking and revealing the hidden heritage of the Westmorland Dales, ‘enabling more people to connect with, enjoy and benefit from this inspirational landscape’ (Friends of the Lake District 2020). The scheme was funded by the National Lottery Heritage Fund (NLHF) and Yorkshire Dales National Park Authority (YDNPA) Sustainable Development Fund.
- 1.2 The survey area covered 5.72km² of predominantly limestone pavement, punctuated by small limestone crags. This area was split into 12 zones (Fig. 2), which formed part of a larger study area composed of 21 zones covering 10.71km. The surveyed zones were selected based largely on archaeological potential, although other factors also came into play. The remaining zones have, or will be, surveyed by members of the Lunesdale Archaeology Society (LAS).
- 1.3 Much of Great Asby Scar comprises a mixture of acidic and calcareous grasslands, heather and mire moorland, forming a wide variety of natural and semi-natural habitats. As part of the preliminary stage of the project, NAA prepared a desk-based assessment that identified the high archaeological potential of the Scar, including prehistoric and medieval sites of national significance (NAA 2017).
- 1.4 Fieldwork was originally planned over two three-week seasons, the first of which took place at the end of September and early October 2019, and the second began in March 2020 but was interrupted by the global Coronavirus pandemic. As a result, the final survey week was postponed until September 2020 and is referred to in the report as Season 3.
- 1.5 Fieldwork was conducted with the help of 33 local volunteers with a maximum of 10 volunteers a day (see, for example, Plate 1). The team was also joined for a number of days by the Yorkshire Dales National Park apprentices. All participants received training



Great Asby Scar, Westmorland Dales: site location

Figure 1

in archaeological landscape survey field methodology and took part in all aspects of data collection including photography, taking measurements, GPS co-ordinates, and other aspects of site recording.



Plate 1: volunteers marking out the line of an earthwork.

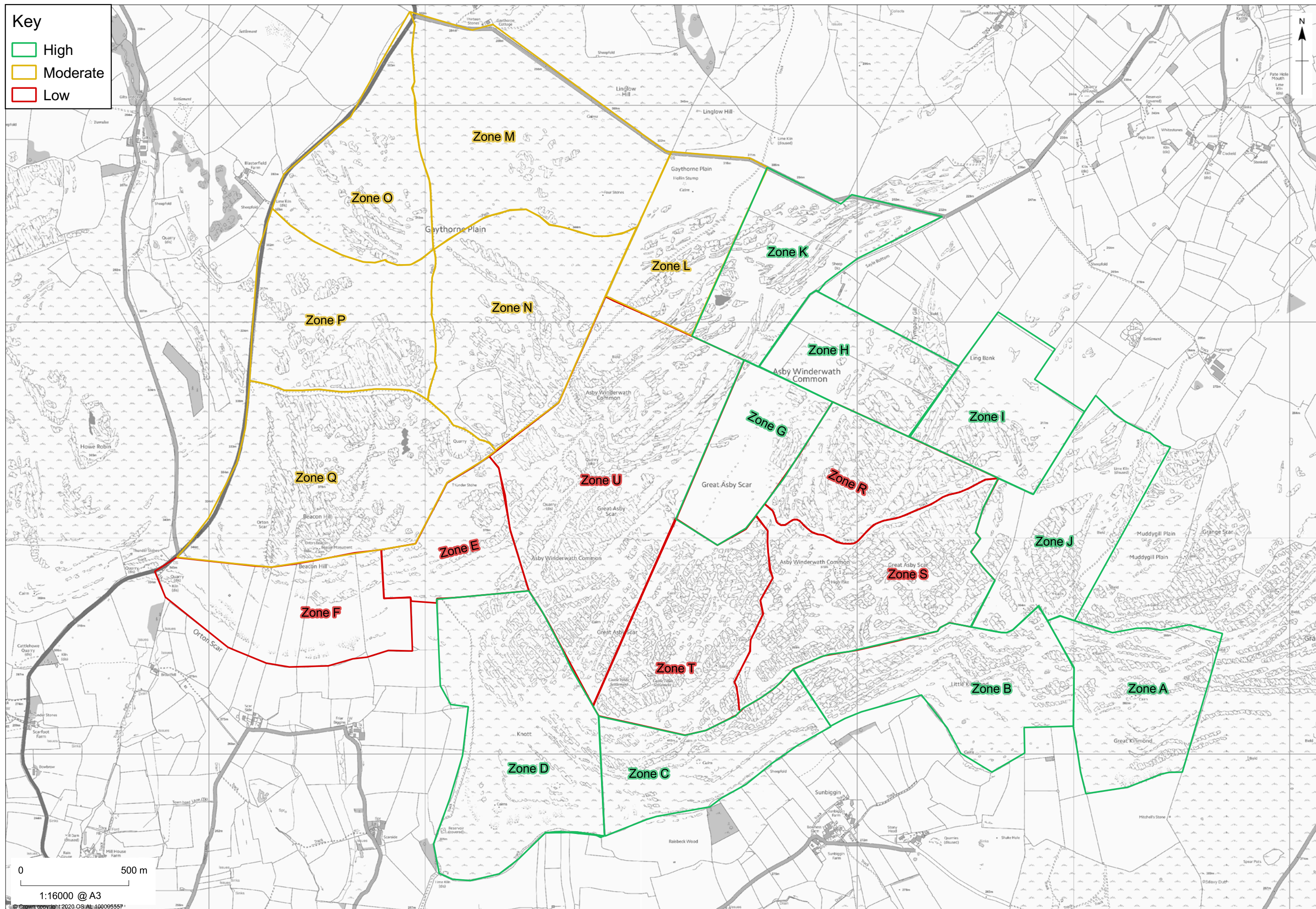
Project aims and objectives

1.6 The two main aims of the project, as set out in the brief (WDLP 2019), were:

- to contribute to a greater understanding of the historic development of the study area and evaluate the nature, form, extent, date and condition of the surviving archaeological resource; and
- to provide professional support and ‘hands-on’ training in archaeological field survey to local volunteers, with the intention of promoting a greater appreciation and enjoyment of the heritage of the Westmorland Dales area, and an active involvement in its conservation.

1.7 The following objectives were set and achieved:

- to undertake further documentary research to inform a greater understanding of the nature and significance of the archaeological resource;
- to undertake a drone survey to inform the field survey;
- to undertake a Level 1 survey across the survey area to establish the presence or absence, location, extent, nature, character, quality, probable date and condition of any surviving archaeological features;



- to train volunteers in landscape survey skills, and facilitate future volunteer-run recording work;
- to produce a gazetteer of all identified archaeology sites suitable to be uploaded onto the Yorkshire Dales National Park Authority (YDNPA) Historic Environment Record (HER);
- to assess the significance of each feature, or groups of features, in order to inform future management;
- to provide a preliminary assessment of condition, vulnerability and potential management recommendations for each site; and
- to produce a report combining all elements.

Project scope and limitations

- 1.8 The wider project area comprised 11km² of limestone pavement and rough pastureland centred on Great Asby Scar (NGR: NY 65365 10213). This is one of the few extensive areas of upland landscape within the Yorkshire Dales National Park that has had little archaeological investigation. The project design divided the area into 21 zones, ranked according to archaeological probability and accessibility (Fig. 2). The volunteer landscape survey focused on 12 of these zones (A, B, C, D, G, H, I, J, K, L, M, N), totalling approximately 5.72km².
- 1.9 The work was conducted over three seasons, with approximately 2.43km² covered in Season 1, 1.9km² covered in Season 2, and 0.94km² covered in Season 3. The extra 0.45km² can be accounted for in the area covered during the three 'taster days' that were organised for the team to test the methodology in the terrain, the results of which are included in this survey.
- 1.10 The project comprised a Level 1 landscape survey of the Scar. Level 1 is defined by Historic England as a 'mainly visual record, supplemented by the minimum information needed to identify the archaeological site location' (Historic England 2017). It primarily comprised the following elements:
- Close-transect field walking of the limestone pavement and rough pastureland to identify archaeological features;
 - recording of individual features, or groups of features as appropriate, using a standard form. All sites were located using a hand-held GPS device; and
 - a digital photographic record of all sites and features identified during the survey.

2.0 METHODOLOGY

- 2.1 Field survey was carried out in accordance with the following published standards and guidelines: *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice* (Historic England 2017).
- 2.2 A documentary desk-based assessment was prepared by NAA as part of the project design (NAA 2017). Primary and secondary information was gathered from the Yorkshire Dales National Park Authority (YDNPA) HER, Cumbrian Archives (Kendal), and Historic England Archive, as well as various local histories and online sources. In addition, sites were plotted from 19th- and 20th-century Ordnance Survey (OS) maps, combined with data gathered from Google Earth aerial photographic coverage and Environment Agency LiDAR data where available.

General field methodology

- 2.3 The 21 zones were organised into three groups according to the probability of finding new sites and safety of access (Fig. 2). Probability did not necessarily equate to archaeological potential as it included factors like ground visibility and whether the area had been surveyed before. Both probability and safety of access combined to inform the priority of surveying the sites. These were then arranged by high (green), middle (yellow), and low priority (red) based on the priority with which they would be surveyed.
- 2.4 It would not have been possible to survey all areas within the allotted six weeks (30 days), keeping in mind that an important aim was to ensure a pleasurable, as well as informative, volunteer experience. It was therefore agreed in advance with the WDLP Cultural Heritage Officer that all of the nine high-priority zones would be surveyed with the possibility of surveying the six moderate-priority zones if time permitted. All high priority areas and three moderate priority areas were surveyed. Zone A was surveyed during the NAA Taster Day sessions and not over the course of the three field seasons, but the results are still discussed in this report. The remaining zones have been surveyed by LAS.

Table 1: survey zones according to selection criteria and area.

Zone	Priority	Area Known As	Area (km ²)	Centre Grid Point
A	High	Great Kinmond	0.43	367284, 509227
B	High	Little Kinmond	0.51	366351, 509299
C	High	Sunbiggin	0.38	365340, 509006
D	High	Knott	0.76	364435, 509084
G	High	Great Asby Scar 1	0.30	365523, 510394
H	High	Tympany Gill	0.31	366008, 510803
I	High	Ling Bank	0.35	366644, 510621
J	High	Cowman's Scar	0.52	366986, 510108
K	High	Linglow Plain 1	0.42	365814, 511250
Total area			3.98	
Total area minus Zone A			3.55	

L	Moderate	Linglow Plain 2	0.35	365211, 511359
M	Moderate	Gaythorne Plain 1	0.80	364536, 511881
N	Moderate	Gaythorne Plain 2	0.68	364496, 510961
O	Moderate	Gaythorne Plain 3	0.43	363667, 51846
P	Moderate	Gaythorne Plain 4	0.54	363622, 511079
Q	Moderate	Beacon Hill	0.79	363590, 510294
Total area			3.59	

E	Low	Thunderstone	0.27	366140, 510037
F	Low	Orton Scar	0.45	363346, 509673
R	Low	Great Asby Scar_2	0.52	365193, 509593
S	Low	Great Asby Scar_3	0.64	366042, 509736
T	Low	Great Asby Scar_4	0.35	366112, 510300
U	Low	Asby Winderswath	1.00	364887, 510169
Total area			3.23	

Table 2: zones surveyed by NAA and included in this report.

Zones	Field Season
A	Taster days, Field Season 1
B	Field Season 1
C	Field Season 1
D	Field Season 1
G	Field Season 2
H	Field Seasons 1 and 2
I	Field Season 1
J	Field Season 1
K	Field Season 2 and 3
L	Field Season 2
M	Field Season 2
N	Field Season 3

- 2.5 Prior to entry into the field, modern and historic maps were printed at a suitable scale and overlain with the sites identified during the preliminary desk-based assessment (Appendices A and B; Fig. 3). A systematic walkover of each survey zone was conducted, walking close-transects along a fixed compass bearing. These were generally aligned along the perimeter field wall, where possible, or based on other easily visible linear landmarks. The team members were spaced at between 5m and 20m intervals, depending on the nature of the terrain and overall visibility. All volunteers were shown how to use the compass to set and walk a bearing, or back-bearing, as appropriate. The surveyed transects were marked on the base map at the end of each session. Any areas that could not be surveyed were also annotated on the map.
- 2.6 New sites were recorded on a pro-forma sheet which included: a basic description of the site; notes on land use and/or type (e.g. rough grazing or limestone pavement); condition (including details of damage); and stability and vulnerability (e.g. bracken, dismantling by walkers). Location was recorded using a hand-held GPS, accurate to at least $\pm 5\text{m}$. A digital photographic record was made of all sites where possible, although weather conditions limited this in some cases. Further photographs relating to condition or management concerns were taken as a reference where relevant.
- 2.7 Prior to the start of the survey, the proposed survey methodology had been trialled during three 'taster days' organised as part of the earlier phase of work in July and October 2017 and April 2018. The focus area of the pilot study was Zone A (Fig. 2), known as Great Kinmond. This area was chosen because it included areas of outcropping limestone pavement, as well as rough pasture which allowed the team to assess the methodology in both of the key terrains covered in the main survey. The results of the 'taster days', together with those from earlier LAS surveys, have been compiled with the results in the gazetteer at the end of this report and will be included as part of the main discussion.

Drone survey

- 2.8 A topographic, small, unmanned aircraft (SUA) survey was carried out on Zones B, C, and D (Fig. 2). To acquire the systematic recording needed, a DJI Inspire 1 drone was required to fly autonomously, and it was flown in parallel flight transects covering each field. The drone has four motors and a camera that can rotate independently from the drone. The pilot monitored the whole flight, taking control of the device when needed. The drone took photographs at pre-set intervals in order to obtain sufficient overlaps. An onboard GPS logged the location of each picture frame which were then matched

together in post-flight processing. This method allowed a digital surface model (DSM) to be created which greatly assisted in understanding and mapping the landscape and its archaeological features.

- 2.9 The survey was originally intended to acquire high-resolution drone imagery for the survey areas by flying either before volunteer arrival or during lunch breaks, so as not to interfere with the time dedicated to the volunteer ground survey. Unfortunately, due to the vagaries of the weather and the time of year the drone flights were only possible intermittently during the first period of the 2019 survey, the combination of rain and high winds made flying impossible for the remainder of the fieldwork seasons in both 2019 and 2020. Despite this, it was possible to fully cover Zones B, C and D, an area of some 168ha with vertical photography and digital modelling.
- 2.10 The results from the drone surveys demonstrate the value of this type of survey, both for the enhanced resolution of vertical imagery and for the identification and mapping of larger features through digital surface creation. However, its limitations were also evident, both in susceptibility to poor weather and in identifying subtle features below 2m in diameter and/or below around 0.2m in height, which were difficult to distinguish from dense vegetation and shallow geological variations in the landscape.
- 2.11 Since part of the purpose of the drone survey was to inform subsequent field investigations and identify additional features for ground truthing, it rapidly became evident with the weather constraints that the two elements of survey were out of sequence and ceasing to work as intended. This discrepancy effectively meant that the drone survey was only able to help confirm findings already discovered on the ground, rather than help direct them.

The site gazetteer

- 2.12 All existing and potential new sites were entered onto a GIS layer and plotted onto the modern OS base map (1:10,000; Fig. 3). Existing and new sites were plotted as point, line or polygon data, depending on their form, and embedded with a unique identification number (UIN) used in the compilation of the site gazetteer (Appendix C). All confirmed sites will be entered onto the YDNPA HER.

3.0 BACKGROUND INFORMATION

Location

- 3.1 The 11km² Great Asby Scar study area lies c.3km south-west of Great Asby village, and c.2km north-east of Orton (Fig. 1). It is c.4.75km east to west and c.3.75km north to south. The southern boundary lies 0.5km north of Sunbiggin, while the northern boundary follows the course of the B6260 towards Coal Hill, before turning south-east to skirt along Linglow Hill. At the centre of the area is Great Asby Scar, which reaches a height of 412m above Ordnance Datum (aOD) on the southern edge and 372m aOD at the top of High Pike. West of this extends Asby Winderwath Common and Gaythorne Plain, descending to a height of 285m aOD at the edge of the B6260.
- 3.2 Orton Scar marks the south-eastern edge of the area, running north to south, above which is Beacon Hill at 392m aOD. East of this is Knott, a promontory that extends to the south and overlooks Gamelands Stone Circle, and Great and Little Kinmond. The western boundary follows the 19th-century enclosure wall that divides Great Asby Scar from Muddygill Plain and Grange Scar. Little Asby Scar and Sunbiggin Common lie to the east of this; both were surveyed in 2004 by Oxford Archaeology North (OAN) as part of an earlier project funded by the Friends of the Lake District (OAN 2004).
- 3.3 Settlement in the immediate vicinity of the Scar comprises a series of hamlets located on the southern valley slopes, the largest of which are Raisbeck and Sunbiggin, but also including Friar Biggin and Scarside.

Landscape character and use

- 3.4 Great Asby Scar forms part of the southern section of the Orton Fells, National Character Area 17 (Natural England 2013), a landscape dominated by the limestone plateau that stretches from Crosby Ravensworth Fell in the west to Ash Fell in the east. The limestone beds dip gently north-east to form a series of parallel escarpments that drop down to the Eden Valley in the north-east and the Lune valley in the south (Natural England 2013, 21). These are characterised by a Karst landscape, where the dissolving of the limestone bedrock has created sinkholes, sinking streams, caves, springs, and other characteristic features. The Orton Fells landscape features limestone pavements, rocky outcrops, scree and scars, punctuated by upland heath and calcareous and acid grassland.

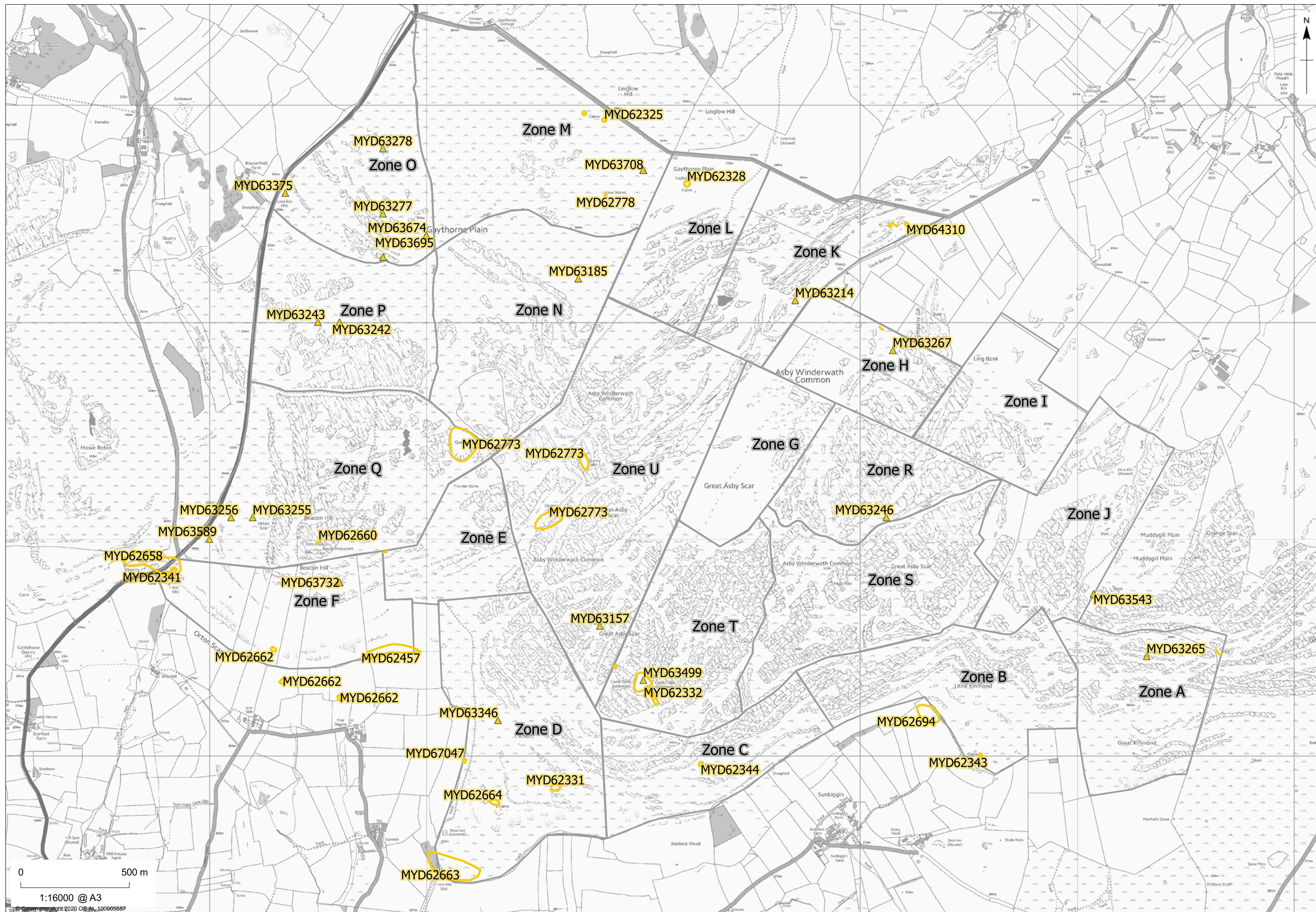
- 3.5 Much of the upland is still common land, providing rough pasture grazing for both cattle and sheep. On the lower slopes and valley bottom, fields are managed for livestock grazing, and bounded by drystone walls built of local limestone. Some of the best, most species-rich hay meadow in Cumbria is found in the area (*ibid.*, 8).
- 3.6 Population numbers are low and focused around the key settlements of Orton, Great Asby, Little Asby, Raisbeck, Sunbiggin and Crosby Ravensworth. The majority of these historic villages are medieval in plan, with buildings and walls constructed of local limestone. They are surrounded by the vestiges of the open town-field system, preserved in the line of later enclosure field walls. Woodland cover is sparse and restricted to isolated ash trees on the limestone pavement or along field boundaries. There are recently planted blocks of conifer plantation, one of the largest being Maskriggs Wood, located c.0.5km north of the survey area.
- 3.7 There are no exposed water sources across the Scar, but several tributaries rise within the watershed including the Rais Beck, Kell Sike, Middleholme Beck and Tarn Sike, which issue to the south of Great Asby Scar, and Dina Gill and Scale Beck to the north.

Geology

- 3.8 The solid geology is the Knipe Scat Limestone Formation, a group of sedimentary limestone forming part of the Great Scar Limestone Group and formed approximately 331 to 335 million years ago (Natural England 2013). Glacial action scoured the landscape, exposing the underlying limestone and resulting in a low ridge of hills, characterised by extensive outcropping, scars, pavement and karst features.
- 3.9 The local drift geology is mostly till (boulder clay) deposited along the valley bottom in the post-glacial period (OAN 2004, 10). Scouring by the retreating ice sheets has resulted in thin overlying soils on the uplands, predominantly calcareous in origin and associated with the erosion of the underlying limestone. Erratic boulders of Shap granite are found across the area, as well as reworked erratics from the Southern Uplands (Natural England 2013, 21), while springs and outflows of calcareous water have created local tufa deposits. Less permeable marl has given rise to water features like Sunbiggin Tarn.

Known archaeological sites

- 3.10 Fifty nine known heritage assets were recorded on the YDNPA HER (Fig. 3). This is a list of archaeological sites, historic buildings, findspots and historic landscapes recorded in



Great Asby Scar, Westmorland Dales: Historic Environment Record Sites

Figure 3

the national park. In this context, a heritage asset is defined as a building, monument, site, place, area or landscape identified as having a degree of significance because of its heritage interest (MHLG 2019).

- 3.11 The HER provides a good starting point for an analysis of the archaeology of Great Asby Scar, but there are obviously gaps in the record. Of those sites recorded, 32 (55%) are prehistoric in date, of which 14 (25%) are from earlier investigations focused on Gaythorne Plain (Cherry and Cherry 1987; 1992; 1995; 2002). The paucity of material dating to later periods is, therefore, skewed by the focus of previous research, rather than being a true reflection of the archaeological resource in the area.

Scheduled monuments

- 3.12 The 59 recorded sites included eight scheduled monuments, detailed in the table below.

Table 3: scheduled monuments within the study area.

NHLE No.	NAA ID	Name
1007584	M402	Round cairn 600m south-east of Gaythorne Cottages
1007585	M401	Round cairn 690m south-east of Gaythorne Cottages
1011152	L431	Hollin Stump round cairn
1011153	LAS survey	Round cairn 460m north-northeast of Broadfell
1011149	B119	Round cairn at Sunbiggin
1011150	C69	Round cairn 450m south-east of Castle Folds
1011141	LAS survey	Castle Folds Romano-British defended stone hut circle settlement and medieval sheiling
1007636	LAS survey	Friar Biggins monastic Grange

- 3.13 Gamelands Stone Circle (National Heritage List for England (NHLE) 1011138) lies just outside the area on the east side of Knott Lane.
- 3.14 Scheduled monuments are given statutory protection under the Ancient Monuments and Archaeological Areas Act 1979. This is the highest level of protection that can be given to a heritage site. It is a criminal offence to demolish, destroy, or damage a scheduled monument and permission to repair, investigate or alter a monument or its immediate setting requires Scheduled Monument Consent from the Secretary of State for the Department for Digital, Culture, Media and Sport.

Natural environment designation

- 3.15 A number of Natural Environment designations also apply across the area. All but the northern tip form part of the Asby Complex (Great Asby Scar) Limestone Pavement Order. The Scar is also a Site of Special Scientific Interest (SSSI) (Ref No: 1058494), National Nature Reserve (NNR) (Ref: 1006751), and Special Area of Conservation (SAC) (Ref: UK0014778), reflecting the exceptional geological significance of the area and importance of the calcareous grassland habitat.

Previous archaeological fieldwork

- 3.16 During the 1980s and 1990s, informal walkover surveys of the area between Shap and Kirkby Stephen were carried out, this included Gaythorne Plain in the north-west section of the survey area (Zones N to P) (Cherry and Cherry 1987; 1992; 1995; 2002). Numerous field monuments and artefact scatters were identified in this area including flint and pottery assemblages, many of which are recorded on the YDNPA HER.
- 3.17 In 2004, Oxford Archaeology North, on behalf of the Friends of the Lake District, carried out a desk-based assessment and rapid identification survey of land immediately west of the study area, focused on Little Asby Scar and Sunbiggin Tarn Common. Ninety previously unrecorded sites were located across the varied terrain of the survey area.
- 3.18 More recently, members of LAS have undertaken Level 1 archaeological survey across the limestone pavement on the east side of Great Asby Scar, and along the southern edge on the high ground overlooking Sunbiggin. A total of 53 sites, predominately clearance cairns, relic walls and enclosures, were recorded by LAS prior to the start of the NAA survey. These have been included in the site gazetteer and are listed separately in Appendix B. The LAS has conducted further work subsequently which will need to be added to the YDNPA HER at a later date.
- 3.19 Great Kinmond (Zone A) was surveyed as part of the pilot project which informed the present survey (Fig. 2). This area was chosen because it included a mixed terrain, both outcropping limestone pavement and rough pasture, which allowed the team to test the methodology in both environments and adapt accordingly. Few sites had previously been recorded on the limestone pavement and it was unclear whether this represented a true absence of archaeology or whether these areas had not been covered in previous investigations. The results of the 'taster days' have been included in the final gazetteer.

4.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 4.1 This section provides a summary of the archaeological and historic development across the wider area in order to place the survey results in context. It is largely adapted from the project design (NAA 2017).

Palaeolithic 800,000BC to 11,000BC

- 4.2 Across Britain, evidence of human activity during the Lower and Middle Palaeolithic is generally restricted to the south, and there are no known sites attributable to these periods in the North West (Hodgson and Brennand 2006, 23).
- 4.3 By the Late Upper Palaeolithic (c.13,000 to 11,000BC), North West England was largely free of ice, the receding glaciers leaving behind a wilderness of ice-scoured rock and morainic debris, although a return to glacial conditions within the Younger Dryas may have restricted the occupation of the British Isles. Palaeoenvironmental evidence indicates that the environment of the Late Devensian III – the last glacial period – consisted open grassland habitats, although as the climate grew warmer into the Mesolithic this was gradually succeeded by lichens, mosses and grasses, juniper and willow scrub (*ibid.*).
- 4.4 There is sparse evidence in North Cumbria, Cheshire and Greater Manchester of Late Upper Palaeolithic hunter-gatherer societies occupying the landscape (*ibid.*). Where this occurs, it generally takes the form of isolated finds of possible Late Upper Palaeolithic lithic artefacts, usually recovered from cave contexts. A number of such sites have been identified across the Yorkshire Dales, including Victoria Cave, where evidence of human activity dating between c.12,400 and c.11,000 BC were identified during excavation. However, again, there are no recorded finds from this period either on or within the vicinity of Great Asby Scar.

Mesolithic 8000BC to 4500BC

- 4.5 As the ice cap melted, environmental changes resulted in a rise in sea-level, an increase in rainfall, and natural successions of woodland vegetation. This was initially hazel and pine, then mixed deciduous woodland (i.e. oak, birch, hazel etc.), with alder dominant around 7000BC, and later oak and elm (Hodgson and Brennand 2006). By 5500BC the lower slope of Great Asby and Orton Scar were probably covered with mixed oak forest, giving way to pine and birch woodland higher up at a height of 600m, with only the higher fells left clear of cover (Rollinson 1996, 13).

- 4.6 There is increasing evidence to suggest that hunter-gather family groups were occupying the area during this period, living a semi-nomadic existence and relying on a wide range of resources for survival. These groups would have moved seasonally across the landscape, foraging over an extensive area for fruit, nuts and plants, and hunting deer, wild cattle (aurochs), boar, wildfowl and fish.
- 4.7 Evidence of such activity is largely restricted to lithic assemblages and organic material, with few structural remains (Hodgson and Brennand 2006, 25). There is, however, a body of palaeoenvironmental evidence which appears to indicate that Mesolithic peoples were actively managing their environment. Pollen analysis from discrete bands of charcoal found in peat deposits across the region, from Solway Moss to Lindlow Moss, suggest woodland was being burnt to create small clearances, followed later by a phase of woodland regeneration (*ibid.*). Such clearings may have served a number of purposes; some might have been temporary hunting camps, while others may have been created to encourage herds to feed in the open in order to optimise hunting potential.
- 4.8 The fertile lands of the Eden and Lune valleys would have undoubtedly proved an attractive prospect to hunter-gather family groups following the herds across the uplands in the summer and moving to the West Cumbrian coastal plain during the harsher months of winter (*ibid.*). The two river valleys, and their numerous tributaries, would have provided important navigation and communication routes through the forested terrain.
- 4.9 Evidence of activity in the Late Mesolithic has been found at several local sites clustered across the limestone uplands at heights of between 275m and 300m (Cherry and Cherry 2002). In the Shap area, these followed the edge of the limestone, with clusters recorded at Tarn Moor and Rayseat Pike long cairn (*ibid.*, 4), as well as at Orton (HER 63423) and Crosby Ravensworth (HER 63460). Just south of the study area, at Gamelands Stone Circle (NHLE 1011138), microliths believed to date to the Late Mesolithic period have been found in association with a Neolithic assemblage (HER 63421) (Cherry and Cherry 1995, 12). The microliths were small shards of flint set into shafts of wood and used in hunting or working wood, bone, leather and other raw material and are a regular component of Mesolithic assemblages. Larger core tools, such as axes and adze are also known.
- 4.10 Cherry and Cherry (2002, 7) have argued that such sites, usually located near a water source, were used repeatedly as seasonal hunting camps in areas that had good open

views and plentiful grazing. The presence of Neolithic material in association with such assemblages suggests a continuity of use across the upland fells across these periods.

Neolithic 4500BC to 2400BC

- 4.11 The Neolithic is marked by the gradual transition from the semi-nomadic hunter-gatherer activities of the Mesolithic to an increasingly more settled, agriculture-based existence. This took place slowly and varied from region to region, manifesting in the archaeological record with the appearance of settlement and ritual sites, together with new technologies (including pottery) and changes in lithic assemblages. The latter saw a move away from the ubiquitous multi-purpose microlith technology and development of a wider variety of tool forms, each designed to fulfil a specific function – flaked and polished stone axes for forest clearance, adzes for ploughing, sickles and querns for processing cereal crops and arrowheads for hunting.
- 4.12 The landscape of the fells would have changed quite dramatically during this period. Pollen analysis from across the region suggests that there was an increase in forest and heathland clearance during the 5th to 3rd millennia in a variety of topographic settings, together with evidence of small-scale cultivation on the eastern limestone plateau (Hodgson and Brennand 2006, 30). Over 12,000 artefacts of flint, chert and volcanic tuff were identified across the limestone during field survey in the 1980s and 1990s. The majority were recovered from rabbit scrapes, erosion scars and ploughed fields along the northern edge of the plateau (Cherry and Cherry 2002, 8).
- 4.13 Locally, earlier survey was focused on top of Orton Scar, where a corpus of prehistoric material has been identified including flint scatters and pottery assemblages. Neolithic pottery fragments have also been recorded in the vicinity of Gaythorne Cottages Round Cairn (west), Gaythorne Plain and Beacon Hill (HER 63659, 63670, 63672, 63685, 63708 63674, 63687, 63690, 63695, 63721, 63729, 63730, 63731, 63732). At all three sites, examples of Peterborough Ware and Grooved Ware were identified, suggesting that they date to the Late Neolithic (Cherry and Cherry 1992). An Early Neolithic to Late Bronze Age flint assemblage was also recorded on Gaythorne Plain, comprising knives, scrapers, flakes and cores (HER 63256).

Bronze Age 2400BC to 700BC

- 4.14 Forest and woodland clearance throughout the Neolithic encouraged herds of wild cattle, sheep and boar to remain in one area throughout the year, beginning the process of animal domestication. This process saw a shift of settlement emphasis away from the

coastal plain, seen in the Mesolithic period, onto the upland fells of the Lake District and the Eden Valley (OAN 2004, 11).

- 4.15 The adoption of a more settled way of life, coupled with a relatively dependable food source, saw an increase in population size and density during this period. This is reflected in the archaeological record by more widespread settlement evidence, comprising huts and walled enclosures, observed at sites such as Carrock Fell, Skelmore Heads and Howe Robin, as well as communal ritual and funerary monuments such as cairns, standing stones, avenues, henges and burial cists (Hodgson and Brennand 2006, 39).
- 4.16 A warmer climate also saw crops being grown at higher altitudes. Banks and ditches associated with Bronze Age field systems have been identified across the upland landscapes of Cumbria, Westmorland and the Yorkshire Dales. The expansion of agricultural settlement and concomitant land enclosure may have also seen the development of the concept of ownership and formation of territorial boundaries (Hewitt 2011).

Settlement sites

- 4.17 Within the wider vicinity of Great Asby Scar, a settlement has been identified at Blasterfield, c.2.8km to the north-west. This measured c.13m across and had an entrance on the north-east side and hut circle to the east (HER 63277). South of this, a rectangular enclosure has been identified on the edge of the limestone pavement at Orton Scar (HER 63242), and a further possible site just to the east (HER 63255) comprises two raised circular platforms, believed to be hut circles, surrounded by an enclosure wall.

Iron Age and Romano-British 700BC to AD410

- 4.18 Evidence of Iron Age activity across the North West is scarce, with a paucity of surviving material culture and few excavated sites. This lack of visibility in the archaeological record may in part be due to a similarity in form between Iron Age and native Romano-British settlements (OAN 2004, 12; Hodgson and Brennand 2006, 51). Settlement in both these periods is typified by walled enclosures similar to those found at a number of sites across Orton, Asby, Crosby Ravensworth and Crosby Garret. Indeed, their frequency suggests the area was quite densely populated during this period compared with other parts of the North West (OAN 2004, 12).

- 4.19 One such site is Ewe Close approximately 3km north-west of Great Asby Scar, on Crosby Ravensworth Common. This has been dated by the associated pottery assemblage to the Romano-British period (HER 62294). Similarly, at Broadwood, near Ingleton, radiocarbon dating has suggested a similar date to Ewe Close, although a sample taken from the external enclosure bank returned a 1st-century date, possibly suggesting a prolonged period of occupation (OAN 2004, 12).
- 4.20 There are few hillforts known from across the North West, despite the predominately upland landscape. Castle Folds (NHLE 1011141), on the south side of Great Asby Scar, is one of only a handful of known defendable enclosures dated based on its form to the Romano-British or Iron Age period. The site is located in Zone T, not included as part of the survey. It comprised an irregular enclosure, located on a knoll close to the summit of the Scar, constructed of limestone rubble, with evidence of approximately 12 roughly circular stone 'huts' built against the boundary wall. Analysis has indicated that the wall was deliberately destroyed, as opposed to being robbed out. A post-medieval sheiling later occupied part of the enclosure (*ibid.*).
- 4.21 Further evidence of Iron Age activity was discovered in 1993 when a 'La Tene' Iron Age sword and scabbard was found by metal detectorists near the trackway crossing Great Asby Scar (HER 63246). The iron sword was encased in a richly decorated bronze scabbard, with various attachment rings and domed studs, and dated to the 1st century BC. More recently a copper-alloy pommel cap of similar date and style has been recorded on the Portable Antiquities Scheme database, recovered from the immediate vicinity of the earlier find (PAS 2020).

Roman military AD43 to AD410

- 4.22 The North West was a key military zone during much of the Roman period, forming a strategic link between the south and the militarised zone along the northern frontier. The main trans-Pennine route, transporting troops and supplies across the country, followed the course of the modern A66. A second road ran north up to Hadrian's Wall, following the course of the Lune valley from the fort at Low Borrowbridge, up onto Crosby Ravensworth Fell, then north to Penrith and Carlisle, crossing the trans-Pennine road at Brougham (RCHME 1936) (Plate 2).
- 4.23 By the 2nd century AD there was a string of forts marking the route of the road, from Maiden Castle in the south to Brough in the north, each serving as a supply depot, garrison and administrative centre. Native settlement in the hinterland expanded to

meet the increased demands of agricultural production, supplying the granaries of the legions.

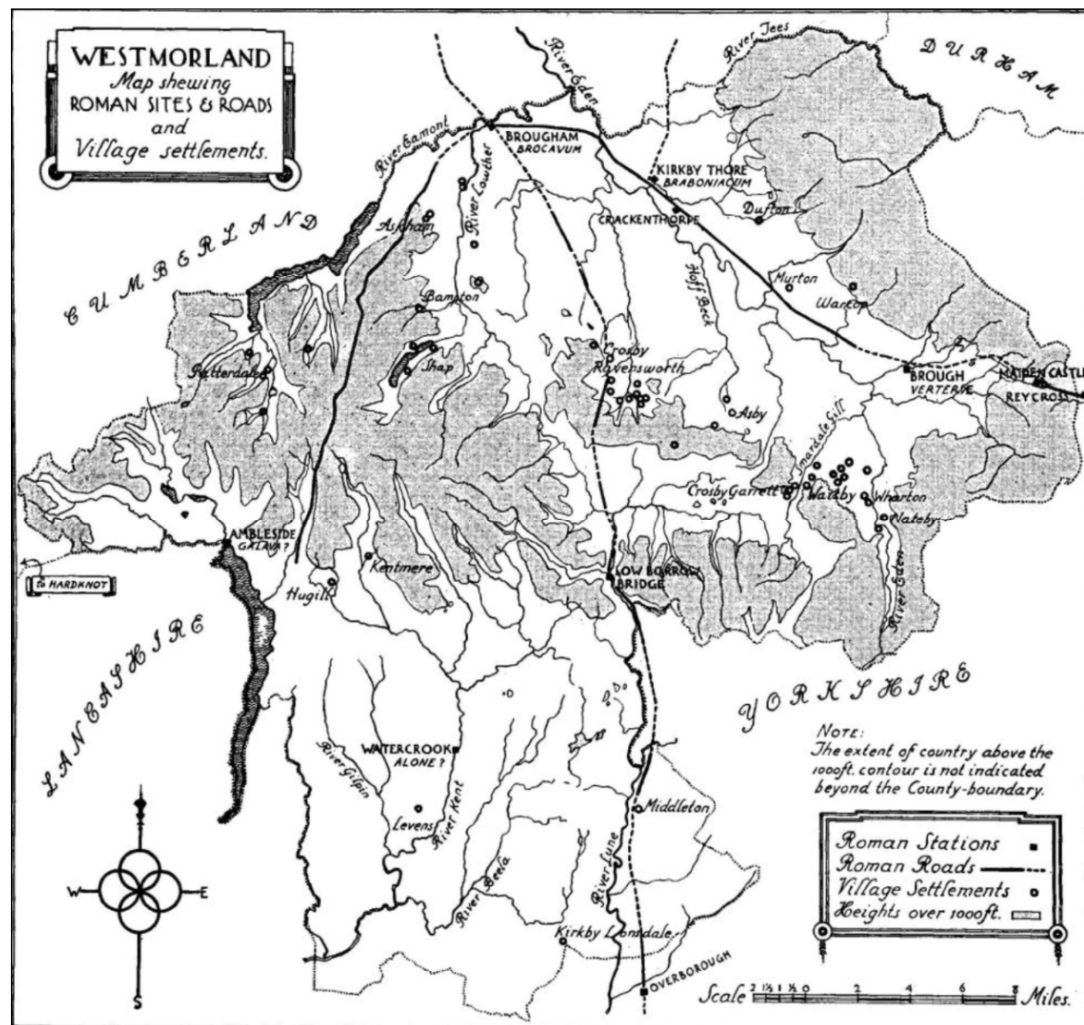


Plate 2: plan of Roman roads (Curwen 1932).

- 4.24 The nearest evidence of military activity to Great Asby Scar is the Roman fort at Tebay, located at Low Borrowbridge, c.8km to the south-west of the survey area. This is a well-preserved and extensive fort and settlement site, recently excavated by LAS (NHLE 1007240). There are also two Roman sites recorded on the HER, both findspots. The first was a 'silver find' from Orton Scar (HER 63589) and the second a fragment of a Roman vessel recovered from Gaythorne Plain (HER 63675). Such isolated finds are of limited significance, although they suggest some degree of possible interaction between the Roman army and local native populous.

Early medieval AD410 to AD1092

- 4.25 Following the withdrawal of the Roman army in AD410, the North West fragmented into a number of smaller kingdoms and tribal units. The area around Great Asby formed part of the Kingdom of Rheged, ruled by the British king Urien (Rollinson 1996). This

area was later subsumed into the Anglo-Saxon heptarchy, becoming part of the Kingdom of Northumbria by the end of the 7th century. During the 8th century, Northumbria declined in power and the region entered a period of political instability, subject to Scandinavian and Hiberno-Norse influences. This continued through until 1092, when Norman control was eventually asserted (Newman 2006a, 91).

- 4.26 Archaeological evidence dating to this period is sparse across the region. However, advances in scientific dating techniques, and increased palaeoecological sampling, has indicated an early-medieval presence at a number of sites where there had previously been scant cultural indicators (*ibid.*). This new research is beginning to redress the balance, although settlement distribution studies still predominantly rely heavily on place-name evidence, with all its recognised vagaries and limitations (*ibid.*).
- 4.27 The majority of the places within, or close to, the survey area are of Old Scandinavian or Old English origin. The first reference to Great Asby is c.1160 when it appears as *Aschaby*; in 1292 it appears as *Magna Askeby*, *Asbie* in 1654 and *Ashby* by 1713. The name derives from the Old Scandinavian *Aska + by(r)*, meaning farm where the ash tree grows. Little Asby as a distinct unit is first referred to in the Lowther manorial deeds of 1185 as *Parva Askeby* (Ekwall 1960, 13; Mills 2003, 19; OAN 2004, 13).
- 4.28 Windermere, with respect to Windermere Common, first appears as *Vinanderuuat* in 1277 and *Wynanderwath* by 1292. This name is believed to derive from the personal name 'Vinand', which is clearly Anglo-Scandinavian in origin, and the Old Scandinavian word for ford—*wath*, hence Vinand's ford (Ekwall 1960, 522).
- 4.29 Sunbiggin is first documented in 1310 and probably derives from the Old Scandinavian *sun* and the Middle English *biggin*, meaning south, or sunny, building, which aptly describes the settlement location on the south side of Great Asby Scar (Mills 2003; OAN 2004, 14). North-east of this, Little and Great Kinmond are Old English in origin from *Cyning* meaning king, or perhaps the personal name *Cyne*, or Old Gaelic *kin* meaning head. This is combined with the Old Scandinavian suffix *mond*, meaning hill, thus translating as the head of the hill, king's hill or Cyne's hill (Mills 2003).
- 4.30 To the west, Gaythorne is from the Old Scandinavian *geit* for goat and *thorn* for thorn, or possibly the Old English *thorp*, meaning an isolated farmstead. Together the name means 'goat thorn plain', or outlying farmstead with goats. Finally, Orton first appears as *Orreton* in 1210, derived from the Old Scandinavian personal name *Orri* and the

suffix *tun*, the Old English version of the Old Scandinavian *byr*, meaning farmstead or hamlet.

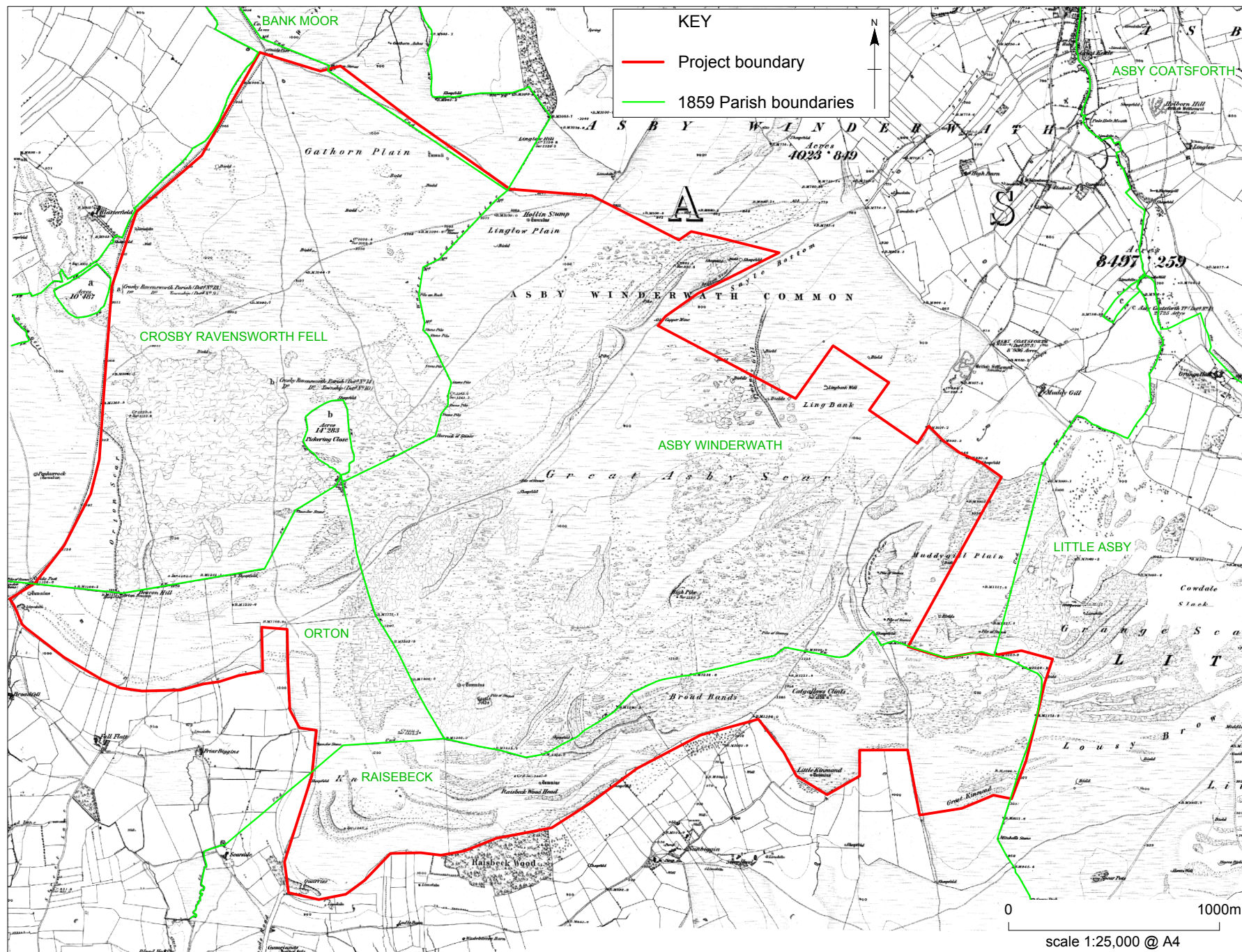
- 4.31 The high frequency of Old Scandinavian place names is a pattern repeated across the Eden and Lune Valleys, suggesting that many local settlements were founded during the period of Hiberno-Norse influence in the 8th and 9th centuries. Those names with a strong Old English element could be earlier, dating to the 7th century, but any hypothesis based on place-name evidence alone is tentative at best. However, it is evident that there was substantial pre-Norman occupation in the area prior to 1092, some of which may have continued through from earlier periods, although names with a personal prefix, such as *Vinandr* and *Orri*, often indicate foundation settlements (Mills 2003).
- 4.32 There is no direct archaeological evidence of early-medieval settlement on Great Asby Scar, although presumably some of the native Romano-British sites previously discussed may have remained in use. Recent excavations elsewhere in the region have uncovered evidence of early-medieval activity at Fremington, near the Roman fort at Brougham, where four sunken-featured buildings were identified. Further evidence has also been found on the outskirts of Whinfell Forest and at Shap, where rectangular post-built structures have been found in association with loom weights dating to the 7th and 8th centuries (Newman 2006a, 98). This all suggests there was settlement activity in the surrounding area during this period.
- 4.33 On the Scar itself, three secondary burials at Castle Folds Round Cairn (NHLE 1011150), excavated by Canon Greenwell in the late 19th century, were described at the time as being 'Anglian' in origin (HER 62344). The reuse of a prehistoric monument for burial suggests they were more likely to be Anglo-Scandinavian, with similar examples identified across Scotland and Cumbria associated with Viking burial (McLeod 2014).
- 4.34 The only other evidence from this period across the vicinity are find spots. An Irish-Scandinavian penannular brooch and silver torque were found at the north end of Orton Scar in 1847, and more recently a hoard of pre-Conquest metalwork was uncovered on Asby Winderswath Common (OAN 2004).

Medieval 1092 to 1535

- 4.35 The Norman invasion, which had such a significant impact on much of England, had little effect on Westmorland and Cumbria. The region remained debatable land until

the late 11th century. In 1070, Malcolm II of Scotland invaded Cumbria, seizing all land north of the Derwent and Eamont, which became part of the Kingdom of Strathclyde (Rollinson 1996, 42). When the Domesday Survey was prepared in 1086, this land remained under Scottish possession and, as a result, the whole of what is now Cumbria and a large part of Westmorland was excluded from the survey.

- 4.36 In 1092, William Rufus (William II) marched north with an army to take Carlisle, garrisoning the castle there and finally establishing a new frontier along the Solway. However, the frontier land remained disputed between the Scots and the English through much of the 12th century, until the claim of Alexander II was finally quashed by Henry III in 1216, securing Carlisle and all territories to the south under English rule (*ibid.*; Newman 2006b).
- 4.37 By the late 11th century, Henry II had granted all the land of Carlisle, as well as the lower Eden Valley, to Ranulph de Meschines. In 1120, this was divided into a series of smaller baronies, Westmorland being divided into the two units of Appleby and Kendal. During the mid-12th century the territory was split again into two sheriffdoms (Caerliolum and Westmarieland) later becoming the two counties of Cumberland and Westmorland.
- 4.38 Great Asby Scar originally spanned three ecclesiastical parishes: Asby being the main body of the area; Crosby Ravensworth to the west; and Orton to the south. Orton was later sub-divided to form Raisbeck to the east (Fig. 4). Asby was originally a single manor, encompassing both Great and Little Asby. It was later divided into three townships, Asby Winderswath and Asby Coatsforth (on opposite sides of Asby beck), and Asby Little to the south (Mannex 1849; Whellan 1860). The first reference to the townships appears in the late 12th century, during the reign of Henry II (1154–1189), suggesting the division of the manor had already occurred prior to this. Asby Coatsforth was held by the Coatsforth family in 1199, then passed to the Musgraves. Asby Little was held by the L'Engleys, and Asby Winderswath by the De Askebys (*ibid.*).
- 4.39 By the late 12th century, all three families were gifting land to monastic houses for the foundation of granges, and both the Hospital of St. Leonard at York and Byland Abbey are mentioned in early documentary sources as owning land and grazing rights in Asby (Curwen 1932, 93). A grange was a monastic farm that operated independently of the secular manorial system. Their purpose was to provide food and raw materials to support the parent monastic house, as well as surplus to be sold for profit. The majority



Great Asby Scar, Westmorland Dales: project boundary and the 1859 parish boundaries

practised a mixed economy, but some were more specialist in function, namely bercaries (large sheep farms) and vaccaries (cattle ranches) (Winchester 2000).

- 4.40 An indication of the extent of the Asby granges can be surmised from a grant made c.1160–1170 by Gerard de Lascelles to the monks of St. Mary at Byland of his land at Asby:

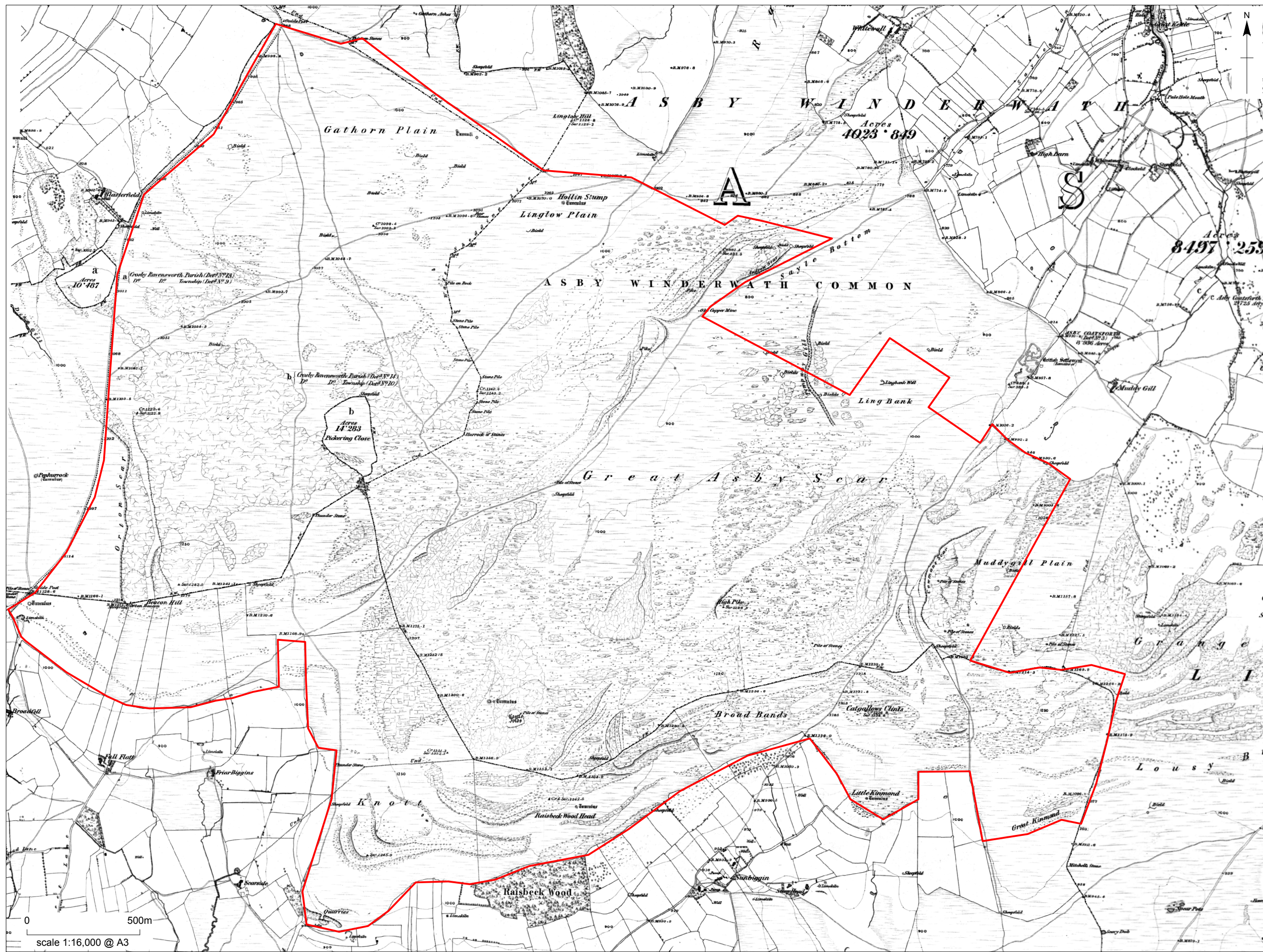
‘as maizongill [Muddygill] goes down from the skerres [the scars] and from the lower head of that gill in a straight line to the thorn tree standing upon the how of stones [cairn], which is on the lower side of Laithgrim, and thence in a straight line across Laithgrim to Little Lingwal, and from thence eastward to the how of stones upon Widkerne Fell, and by that ridge to another how, thence to a third, and so unto the ditch, and beyond the ditch eastward [Southward?] the width of eight perches, and so going down southward unto the tarn [Sunbiggin tarn?], and thence to the boundary of land belonging to the Hospital [Hospital of St. Leonard at York] and by that boundary unto skerres and thence as far as the arable land of Asby extends on that side towards Tebay.’ (Curwen 1932, 93).

- 4.41 Lascelles granted rights to common pasture as well as to materials for roofing and right of turbary (cutting turf), in return for a yearly rent of two marks of silver (Curwen 1932, 93).
- 4.42 The remains of a monastic grange have been located near Friar Biggins farm, on the slope below Beacon Hill. The name of the farm suggests a previous monastic link. The grange was associated with the Friary of Conishead, near Ulverston, and is thought to have been constructed c.1319. It is a Scheduled Monument (NHLE 1007636) and comprises a series of earthworks, including the buried remains of a group of stone buildings, flanked on the east and north by enclosures. Also associated with the site are sections of wall, a trackway, and a number of rectangular terraces cut into the hillside (HER 62457).
- 4.43 The grange estate was part of the manor of Orton, which included the townships of both Orton and Raisbeck. This was held by Gamel de Pennington during the reign of Henry II but was divided soon afterwards. In 1277, it was possessed by the Dacres and Musgraves (Mannex 1849, 182).
- 4.44 The west side of the Scar was part of the manor of Crosby Ravensworth. This was first recorded under the reign of Henry I (1100–1135), when Torphin de Alverstain granted

the church to Whitby Abbey (Whellan 1860). The manor subsequently passed to Thomas de Hastings, who received a grant of 'free warren' from Henry II. Under Forest Law, all game in the realm was property of the sovereign. Free warren principally granted the recipient the right to hunt hare and fox at particular times of the year at a specified place. It was usually granted by the monarch as a reward or favour for service and was seen as a significant mark of status. The granting of free warren to de Hasting also indicates that tracts of land within the township, possibly including parts of the Scar, formed part of the royal forest in the 12th century. The manor remained in the hands of the de Hasting family until the mid-15th century when it passed to the Threlkelds (*ibid.*).

Common land

- 4.45 During this period, Great Asby Scar was common land that was divided between the three townships. It would have been an essential resource, key to the survival of each settlement, with each tenant having carefully controlled and guarded rights to common grazing and estover, which was the right to cut turf, staves, wood, heather, gorse and stone (Winchester 2000). Access to the common land was controlled by the manorial courts, with each tenant being apportioned a share in return for service to their seigniorial lord on the demesne farm or in campaign. A tenant's common rights were restricted to resources sufficient to support themselves and their family, but not to accrue any profit (*ibid.*).
- 4.46 Grazing rights across the commons were linked to the infield-outfield agricultural system operating during the medieval period. This was dependent on the movement of animals, predominantly sheep and cattle, between the townfields surrounding the village and the upland pastures. The two were divided by the head dyke or ring garth; this was a substantial boundary encircling the settlement, usually comprising a high bank set with wooden staves. The farming year was divided into two seasons, known as the 'open' and 'closed' season. During the open season, in winter, animals would be kept close to the settlement and allowed to roam over the communal arable fields, feeding on the remains of the previous season's crop. The movement of the animals served to break up the ground, while their dung fertilised the soil. In the spring, the herds would be moved to the common pasture for the summer and the gate 'closed' across the head dyke.
- 4.47 There is little evidence of arable farming across the Scar. This would instead have been focused on the townfields surrounding the settlements along the valley bottom. The



Great Asby Scar, Westmorland Dales: survey area overlaid onto the 1863 Ordnance Survey map

Figure 5

exception is the lower south-facing slopes of Orton Scar, where a series of long, narrow fields are shown on the First Edition OS Map (Fig. 5). These remain visible across Zone F, just south of Zone D, and north of Zone H. These are the vestiges of medieval strip fields, probably associated with the area called Fall Flats, which may be a shrunken medieval settlement. However, crops may have been grown above the 300m mark prior to changes in climate in the 13th century and again in the post-medieval period.

Post-medieval 1535 to 1900

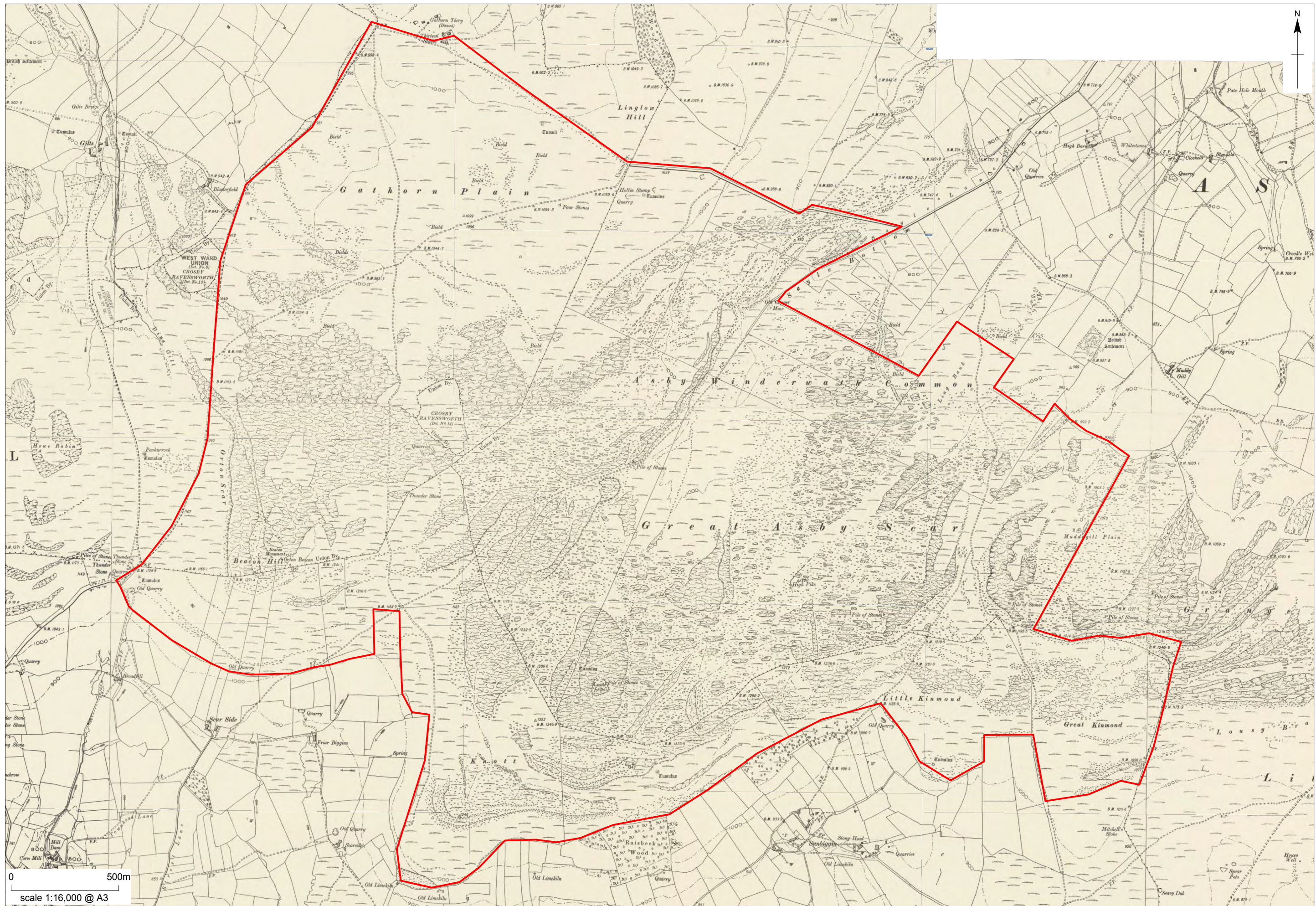
- 4.48 The fragmentation of the grange estates after the dissolution of the monasteries in the 1530s would have had a considerable impact on the landscape. The estates were absorbed into the surrounding manors, or sold as separate holdings by the Crown. Even if the land holding remained similar, land management regimes altered. The start of the period also corresponded with the beginning of the Little Ice Age, which continued through into the 19th century. This initially saw colder conditions and later an increase in rainfall, both of which had an effect on the agrarian economy, particularly in the uplands (McNeil and Newman 2006, 143).
- 4.49 Changes in tenurial rights in the post-medieval period led to greater security in land ownership and the escalation of the process of enclosure by agreement (*ibid.*). This was initially focused on the common arable fields around the villages, but later extended up into the moorland with a series of intakes along the periphery. These were enclosed and improved parcels of pasture ‘taken in hand’ for grazing. This was usually with the permission of the manorial lord, although there were many cases of unofficial intake, particularly in marginal areas away from the village core. The 1777 Enclosure Awards (Fig. 6) provide an indication of the division of common arable around the edge of the limestone pavement by the end of the 18th century, although the bulk of the upland remained common land.
- 4.50 Stinted pastures were another feature of the post-medieval landscape. A stinted pasture was an area of enclosed common or pasture, within which each grazier held rights to a certain number of stints. A ‘stint’ (sometimes termed a gait) was a fixed number of animals, but this varied depending on the beast in question; one stint might equal a ewe with lamb, while a larger animal like a cow might equal three stints (Winchester 2000). The historic mapping indicates little evidence of intakes or stinted pasture within the survey area, the Scar being located at some distance from the main settlements of Great Asby, Crosby Ravensworth and Orton. The exception is along the southern boundary,

including land to the north of Sunbiggin, Full Flats and Friar Biggins, and Pickering Close.

- 4.51 Undoubtedly the most prolific archaeological evidence of post-medieval enclosure visible across the Scar are the drystone walls. The most distinct are the geometric lines of the parliamentary enclosure walls which stretch for miles, sub-dividing the upland. These are mid- to late 19th century in date, their progress clearly evident from comparison between the First and Second Edition OS maps. On the First Edition (Fig. 5) only the southern end of the Orton boundary wall was built in stone, the northern end still followed the irregular line of the old parish boundary. In contrast, the Second Edition map (Fig. 7), published in 1899, showed this as a rationalised boundary line and an array of geometric field boundaries divided the Scar. The 1912 OS map (Fig. 8.) indicated no changes to landscape divisions between the Second and Third Edition maps.
- 4.52 There are a number of interesting field names annotated on the First Edition OS map, in addition to those place names already discussed (paragraphs 4.27–4.29). These include descriptive names reflecting the local topography or agricultural practice, such as Cowman's Scar, Broad Banks and Raisbeck Wood Head. Others are slightly more colourful, including Tympany Gill, aptly describing the drumming of water over the limestone, and the rather disturbing Catgallows Clint, just above Little Kinmond (Fig. 6).
- 4.53 Across the Scar there is extensive evidence of post-medieval industry, the most prevalent of which was quarrying, but also included lime burning and mineral extraction. These industries, and details of the agricultural evidence, are discussed in the Results section.

5.0 RESULTS

- 5.1 During the six weeks of survey, 699 sites were recorded, providing evidence of human activity across Great Asby Scar from the Late Neolithic/Bronze Age through to the modern day. These sites are discussed below according to a series of broad themes. Figure 9 shows the distribution of the sites across the Scar. Figures 10–21 show the sites by Zone according to site type, and figures 22–33 show sites by period. A full list of all sites recorded during the survey is in the gazetteer (Appendix C).
- 5.2 All sites have been given a unique identification number, which appears in bold and in brackets in the text. These are numbered based on zone, in the order in which they were found e.g. sheepfold (**H307**) is in Zone H.



Great Asby Scar, Westmorland Dales: survey area overlaid onto the 1899 Ordnance Survey map Figure 7

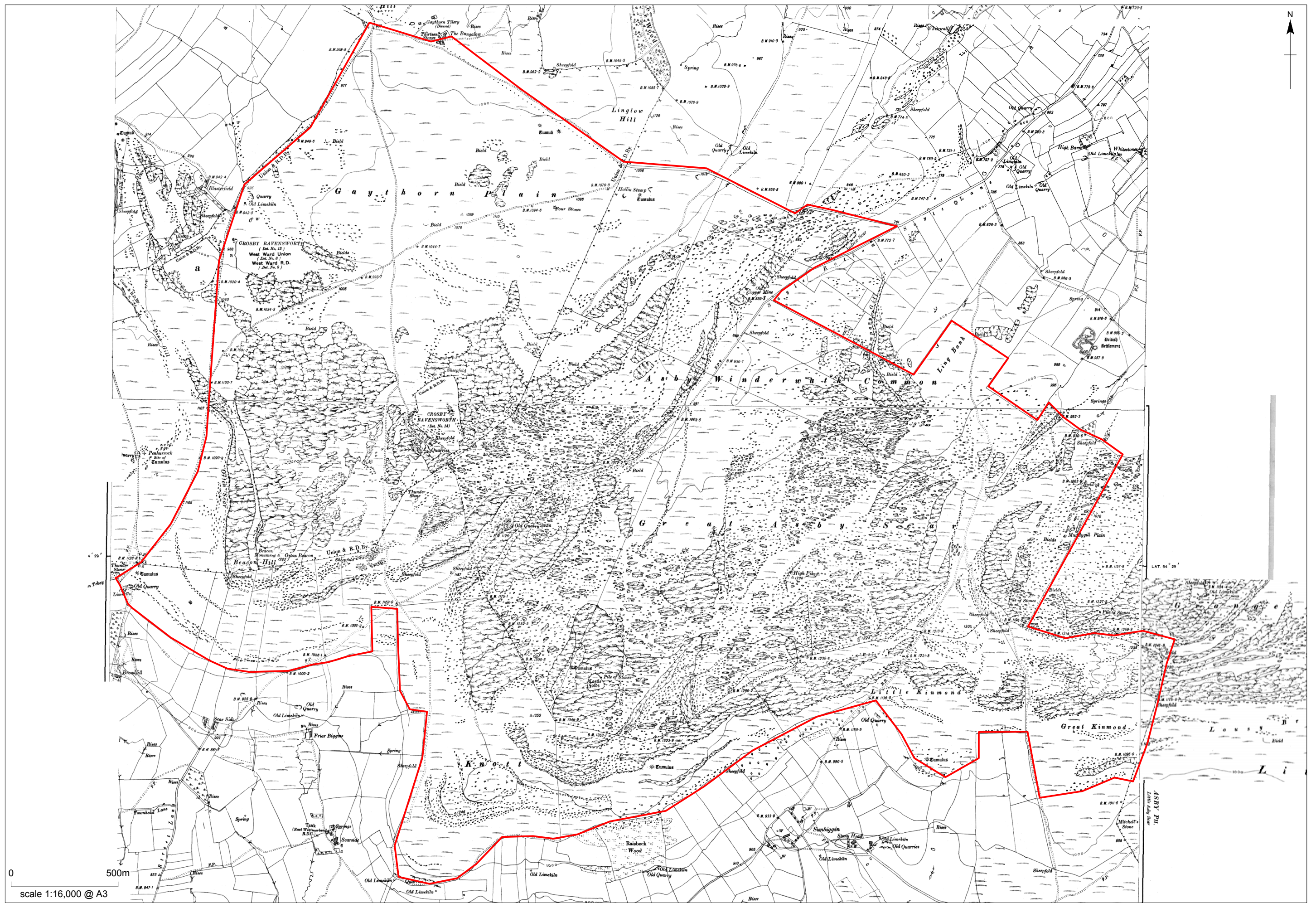
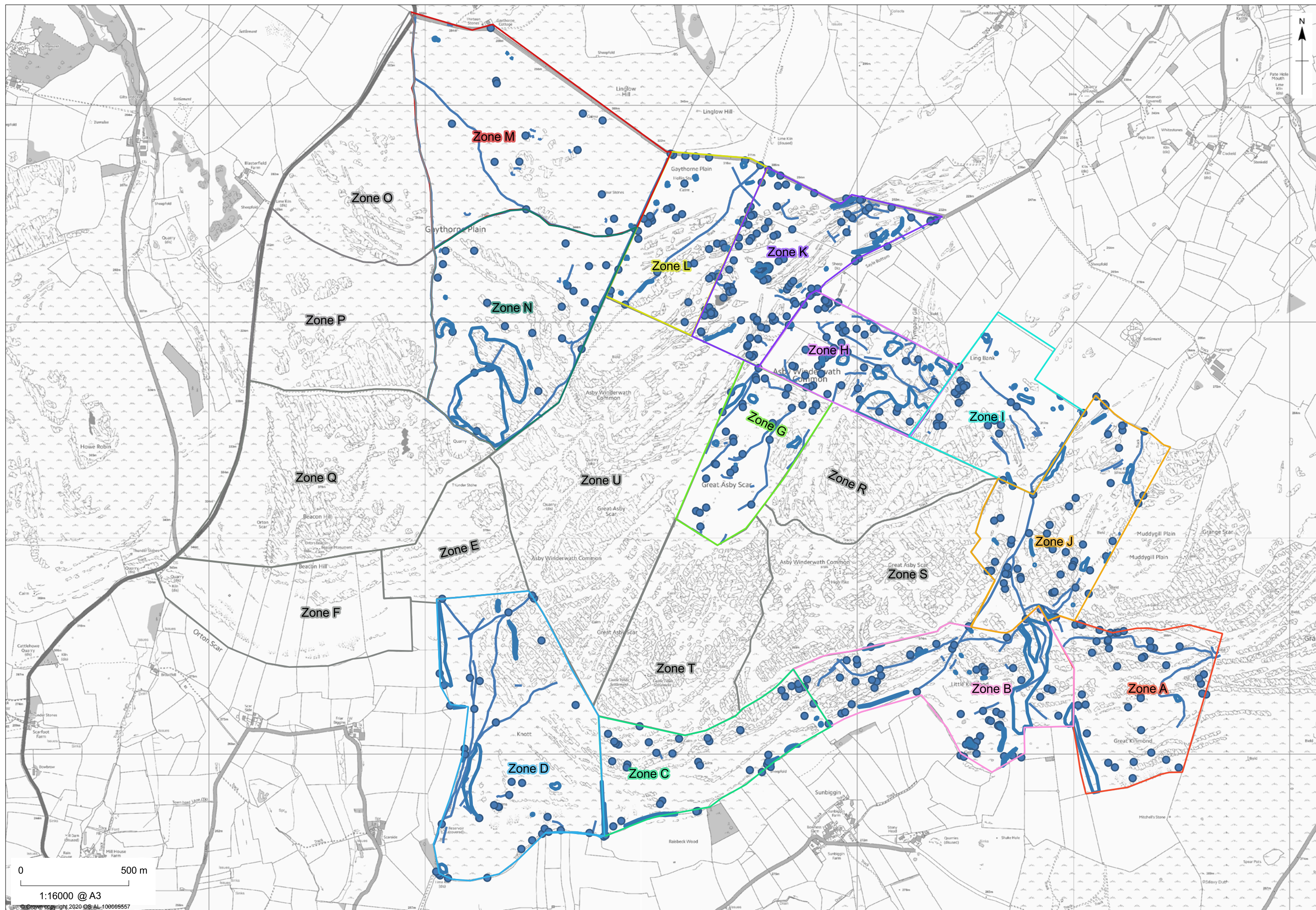


Figure 8



0 500 m
1:16000 @ A3
© Crown copyright 2020 OS AL10005557
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Great Asby Scar, Westmorland Dales: survey sites recorded

Figure 9

Human settlement

Bronze Age

- 5.3 A possible hut circle (**L439**) was identified on the north side of Great Asby Scar, visible on Google Earth satellite imagery. The site is immediately adjacent to a post-medieval boundary wall, with a modern track running along its east edge. The hut circle (Plate 3) is a large enclosure, measuring 9.5m in diameter, comprising a spread of stones, each one <0.5m in diameter. There were three possible smaller circular enclosures identified to the south, each measuring 4m in diameter. These were in poor condition, with only a scatter of large stones visible at surface level, often placed 0.5m apart. Stone from the features may have been used in the construction of the nearby field wall, accounting for the fragmentary nature of the remains.
- 5.4 It is difficult to date the site without further archaeological excavation and application of scientific analysis. Cherry and Cherry (2002) have had some success with dating sites based on the collection of exposed flint, pottery, or bone, although this might not be accurate because some sites may have been continually occupied over a number of years.
- 5.5 Further settlement evidence was identified on the south side of the Scar in Zone B, where two cairnfields were recorded (**B122** and **B123**). A cairnfield is a concentration of cairns sited close to each other. In most cases these are clearance cairns: piles of stone cleared from a surrounding area in preparation of cultivation and/or settlement (see below). These particular cairns have been dated in association with hut circles to the Bronze Age, although clearance cairns can really date to any period. Occasionally, field plots can be identified in the distribution of the cairns.
- 5.6 Cairnfield **B122** consisted of multiple grass covered cairns. At least 14 were recorded across a 500m² area, situated between two limestone outcrops above Sunbiggin Farm (Plate 4). Each cairn averaged 2m in diameter and stood 0.3m high. **B123** was located further north-west, below another limestone escarpment and consisted of six cairns of a similar size. It is possible that **B115**, **B116**, and **B117** may also be clearance cairns as they are similar in style, and located on the edges of a limestone escarpment. These are comparable to those recorded by Cherry and Cherry (1987) above the Potts Valley, and more locally by OAN on Little Asby Scar (OAN 2004).



*Plate 3: hut circle **L439** (looking west). The hut circle now comprises a circular spread of stones. Stones may have been ‘robbed’ during the construction of the post-medieval field wall in the background. A modern track runs along the east edge of the site.*



*Plate 4: one of cairns in cairnfield **B122**. Another cairn in the same cairnfield can be seen to the right.*

Clearance cairns

- 5.7 Clearance cairns can date to any period and are evidence of parts of the Scar being cleared for settlement or arable production. There were many examples of clearance cairns on both sides of the Scar. Some of these, particularly **C92**, **J244**, **J247**, **J253**, **I2997**, **K457**, **K458**, were almost completely covered in turf and while these are impossible to date in isolation, they had clearly been in situ for some considerable time and may be prehistoric (Plate 5). They were discernible as low, grass-covered mounds with occasional stones visible. The lines of former field prehistoric field boundaries can sometimes be discerned in the pattern of clearance cairns, and **C89**, **B115**, **B116**, **G340**, recorded in the middle of modern fields, may mark the edge of land boundaries now long disappeared.



*Plate 5: clearance cairn **C92** is now a very low mound with only a few stones visible.*

Funerary and ritual

- 5.8 Evidence of Late-Neolithic and Bronze Age funerary and ritual activity was found on high points across the Scar. Five known cairn sites on the HER (**C69**, **B119**, **M401**, **M402**, **L431**) were visited as part of the survey. Burial cairns are mounds of earth and stone rubble up to 40m wide, although sometimes considerably smaller, often accompanied by a kerb edge of stone around the periphery. Burials were placed into small pits or in a stone box-like structure called a cist. Many of these were excavated by antiquarians in the 19th, leaving behind an obvious depression.



*Plate 6: burial mound **M401** (looking north). The ranging rods are placed beside the surrounding bank and ditch.*



*Plate 7: burial mound **L431** (looking west). Clear evidence of robbing is present in the cut located on the left (south) side of the mound.*

- 5.9 On the northern edge of the study area are three round cairns (**M402**, **M401**, **L431**), all excavated by Cannon Greenwell in the late 19th century. These are recorded as kerbed cairns, yet no evidence of kerbing was found during the survey, but grass and moss-

cover was high. Two of the cairns, Gaythorne Cottages Round Cairns east and west (**M401** and **M402** respectively), were grass-covered stone mounds c.100m from each other with good views to the north. **M401** (NHLE 1007585), the east of the two, was 13.7m in diameter and stood 0.7m high, surrounded by a shallow ring ditch c.0.5m wide (Plate 6). The west cairn (**M402**) (NHLE 1007584) was smaller, c.9m in diameter and 0.5m high with no ditch. Previous investigation of the west cairn uncovered fragments of Neolithic pottery within the immediate vicinity (**M402**) (Cherry and Cherry 1992 and 2002).

- 5.10 The third cairn (**L431**) was located in the corner of Zone L with good views to the east (Plate 7). The cairn is larger than **M401**, measuring c.21.5m in diameter and standing 1.7m high. It was located c.100m from the present boundary wall and showed clear signs that some material had been robbed out to be used for building elsewhere. Square depressions, averaging 8m across, were visible on the north and south sides of the cairn where stone had been removed. Three granite boulders on the north-east edge may represent the remains of a kerb that has largely disappeared. Quarries **L432** and **L490** were located nearby.
- 5.11 All three cairns are noted on the HER to have contained single or multiple burials, one (**L431**) with a horse skull and knife (HER 62328) and another (**M401**) with a later cinerary (ashes) urn inserted (HER 62325).



Plate 8: burial mound C69 (looking west).

- 5.12 There is a further cluster of cairns on the south side of the survey area. A ring cairn (**C69**), located in Zone C 800m south-east of Castle Folds, was another of the sites

excavated by Greenwell in the 19th century (Plate 8). The primary burial was a young male, interred in a rock-cut chamber at the centre of the mound. Greenwell also recorded three secondary burials, which he attributed at the time to the 'Anglian' period. The cairn is 16.5m in diameter and survived to a height of 1.5m high. It is on the brow of a hill with good views to the south.

- 5.13 The final cairn (**B119**) is located at Sunbiggin (Zone B), approximately 630m north-east of Sunbiggin Farm, on the edge of a promontory below Little Kinmond (Plate 9). This was excavated in the 19th century and found to contain the remains of three cist burials together with stone artefacts, ox bones and antlers. The cairn was 13m in diameter, with a c.2.5m diameter depression at the centre associated with the earlier excavation.



*Plate 9: burial mound **B119** – looking toward Lunesdale to the south from cairnfield **B122**.*

- 5.14 The monument is located on the edge of a limestone outcrop on a knoll above cairnfield **B122**. A possible marker cairn (**B118**) lies on an outcrop above cairnfield **B122**. Marker cairn **B114** is likewise placed above cairnfield **B123**. Both are of unknown function but may relate to the cairnfields in some capacity. During the survey of Little Asby Scar and Sunbiggin Tarn Common, Oxford Archaeology North identified cairnfields adjacent to possible burial mounds indicating there may be a relationship between the agricultural

and funerary activities of the site. These too were located on the south-facing side of the scar, overlooking Lunesdale (OAN 2004).

Iron Age and Romano-British

- 5.15 On the north side of the study area, the remains of a small settlement, dated stylistically to the Iron Age or Romano-British period, were identified on the west side of Tympany Gill (**H517**). The site was bounded by a low, stone-walled enclosure, sub-oval in shape, with an annex on the south-west side and what appeared to be sub-divided areas on the north-east side (HER 63267) (Plate 10). The enclosure wall survived as a line of upstanding stones, set vertically on edge (termed 'orthostats') with occasional sections of infill formed by large, horizontal stones (Plate 11). Orthostats are frequently associated with features of prehistoric or medieval construction.



*Plate 10: the largest enclosure of the settlement **H517**, built primarily of orthostats with some flat-lying stones.*

- 5.16 A structure and possible well lay on the south side of the main enclosure, where there was a second, smaller enclosure forming an annex (Plate 10). Several other walls were visible in the immediate area, many of which included orthostats, standing up to c.1.3m high.



*Plate 11: structure built of orthostats within settlement **H517**.*



*Plate 12: one of the enclosures of settlement **H306** (looking north-west).*

- 5.17 A similar settlement (**H306**) was located 200m further east, on the opposite side of Tympany Gill. Settlement **H306** contained at least seven distinct enclosures and structures visible on satellite imagery. Most of these were enclosed by drystone walls with a notable lack of orthostats (Plate 12). The exception was a line of orthostats

forming a corridor along the north-west boundary of the large central enclosure (Plate 13). At the time of survey, the site was covered in bracken, so detailed examination was not possible, and was outside the scope of this study, but future investigation in the future would be warranted.



Plate 13: the only appearance of orthostats, albeit fallen, is in this linear corridor between enclosures of H306.

- 5.18 Both settlements **H517** and **H306** lie within the northern field of Zone H, each located 100m away from Tympany Gill, which probably provided a source of water, in addition to the possible well associated with **H517**. It is surprising to find two contemporary settlements located so close to each other as they would usually be surrounded by their associated fields (Historic England 2018a, 6). However, it is likely that cultivation was located away from Tympany Gill on each side of the water course. Alternatively, one settlement may have been inhabited after the other. Without further excavation and scientific dating analysis, the date and relationship between the two sites remains conjectural.
- 5.19 Most of the evidence of prehistoric habitation (**L439**, **H306**, and **H517**) was identified on the north side of the survey area, sheltered from the predominant wind direction. The sites were located on the edge of the lowland, below the limestone pavement. In contrast, the earlier Bronze Age cairnfields in Zone B (**B122** and **B123**) are both located in what is now exposed upland environment. However, there would probably have

been considerable tree cover in these areas at the time, although the clearance of land for cultivation likely formed part of the process of transforming the landscape. Further environmental sampling across the Scar might help establish the rate and date of deforestation.

Medieval

- 5.20 Settlement in the medieval period was concentrated on the more fertile soil of the lowlands. Prior to the Dissolution, the monastic grange near Friar Biggins farm (NHLE: 1007636) may have controlled much of the grazing land on the west side of the Scar, within the parish boundary of Orton. Arable strip fields visible in the line of later field walls on the First Edition OS may also relate to the grange or the settlement at Fell Flatts. These are shown extending north up onto the lower slopes of the fell. This was an area of high archaeological potential, identified by LAS for future investigation and therefore not included as part of this study.
- 5.21 For the three townships surrounding the fell, the common land of the Scar would have provided essential grazing for fattening the stock during the summer months. In the absence of walls and stock-proof fencing, a shepherd or stockman would have been required to remain with the animals throughout this period, living in seasonal settlements known as sheilings. These usually began as temporary encampments but often developed into more substantial dwellings with associated stock enclosures. Evidence of several potential sheilings were found across the Scar during the survey, some of which may have seen a continuity of use from existing Romano-British occupation sites (OAN 2004).
- 5.22 Of the eight potential sheiling sites recorded, six were on the southern slope. They varied considerably in form, some with adjacent enclosures and some without (Historic England 2018b). Occupation of the sheilings may not have all been contemporaneous because the practice extended over a long period of time, from the medieval period through to the 18th century in some parts of the country.
- 5.23 Some of the sheilings on the Scar utilised and enhanced natural limestone outcrops, while there is also evidence of the reuse and adaption of existing structures. The sheiling recorded on top of the Knott (**D13**), for example, may have reused an earlier settlement site, although date of occupation is impossible to ascertain without further evidence. The site comprises a single sub-rectangular domestic structure, measuring 13.6m by

8m, with a hearth in the north-west corner (Plate 14). The surviving rubble-built wall is 0.8m high in places. Two large enclosures extend out to the north.



*Plate 14: domestic dwelling of the sheiling **D13** on the Knott. The photo was taken looking north toward the two adjacent enclosures.*

- 5.24 The site is similar in layout to that found at Great Kinmond Scar (**A596**), both containing an associated sub-rectangular stone-banked enclosure. **A596** consists of a circular stone-built enclosure opened to the west just below the limestone scar. It comprised a rubble wall, 0.7m high, forming a structure measuring 7m by 6.6m. According to the HER record, Dr Nick Higham has suggested that there may be an earlier hut circle and related enclosure on the Great Kinmond site (**A596**), as at Knott (**D13**).
- 5.25 Other possible sheilings were identified situated between limestone outcrops in Zone B. They were small rectilinear structures and enclosures built into the limestone pavement, very similar in style to those found further east on Little Asby Scar and Sunbiggin Tarn Common (OAN 2004). Site **B149** consisted of a low earthwork running east-west, built against the limestone pavement to form a series of structures and enclosures. The site comprises five enclosures, the largest was on the west side of the complex, probably representing the remains of a small garth. This was sub-rectangular in plan, c.30m long and bounded on three sides by an earthwork bank measuring 2.2m wide, which abutted the limestone pavement to the north (Plate 15). Immediately to the

east of the garth a series of earthworks were associated with a structure c.25m long, and divided into four small rooms.



Plate 15: earthworks of a possible sheiling (B149) built up against the limestone pavement. Photo was taken looking south.

- 5.26 Also in Zone B, sites **B175** and **B176** were built against the edge of the limestone pavement. At both sites there was earthwork evidence of a number of structures, standing on average 0.4m high and incorporating sections of the natural limestone pavement in their construction (Plate 16). These may be associated with two further enclosures found built up against the limestone pavement nearby on the same escarpment (**B174** and **B178**); possibly stock-holding pens associated with the main sheiling complex.
- 5.27 Site **B142** (Plate 17), identified on the limestone scarp in Zone B, was a circular earthwork divided internally into two sections. Adjoining this to the south was a smaller circular structure. Both structures were accessed by a doorway facing east. Unlike the other structures in Zone B, **B142** stood isolated without associated structures.



*Plate 16: site **B176** (looking south-west). The structure is composed of two circular cells built against the limestone pavement.*



*Plate 17: possible sheiling **B142** (looking south toward Lunesdale).*

- 5.28 Evidence of sheilings was not restricted to limestone outcrops. In Zone M, a rectangular earthwork (**M404**) was identified in moorland. This was a three-sided structure, open to the north. The remaining walls survived to a height of c.0.5m, constructed of moss-covered boulders. Adjoining **M404** to the north was a second sub-rectangular structure

(**M403**) (Plate 18), also open to the north. The fourth wall of the enclosure was possibly lost through erosion.



*Plate 18: structure **M404** with the wall **M403** to the rear (north).*



*Plate 19: volunteers surveying enclosure **N677**.*

5.29 Another further possible sheiling site (**N677**) comprised a round, stone enclosure with accompanying walls and banks (Plate 19). The enclosure was approximately 15m in

diameter formed by a stone bank and containing a small circle of stones c.1.9m in diameter near the centre. A low bank (N679) extended to the north. Another structure N678 was of stone, and 5.3m in length. This may have originally been sub-divided into two areas, although only one is now present. A further set of banks (N698) averaging 9m long were recorded 20m to the west of the enclosure. The extent and complexity of the site suggests a high level of activity, if not settlement, and would certainly warrant further detailed recording in the future.

Post-medieval

- 5.30 Enclosure of the common land in the post-medieval period, coupled with the widespread construction of stock-proof fencing, meant that there was no longer a requirement for a stockman or shepherd to be resident on the uplands through the summer. This brought about the gradual decline of the sheiling. A number of these former temporary sites developed into permanent upland farmsteads, although it appears all those on the Scar were abandoned. This marked the end of permanent or semi-permanent human settlement on the Scar. Most structures thereafter relate to temporary shelters associated with agriculture, industry or recreation.



Plate 20: view of the quarryman's hut K620, looking towards quarry K619.

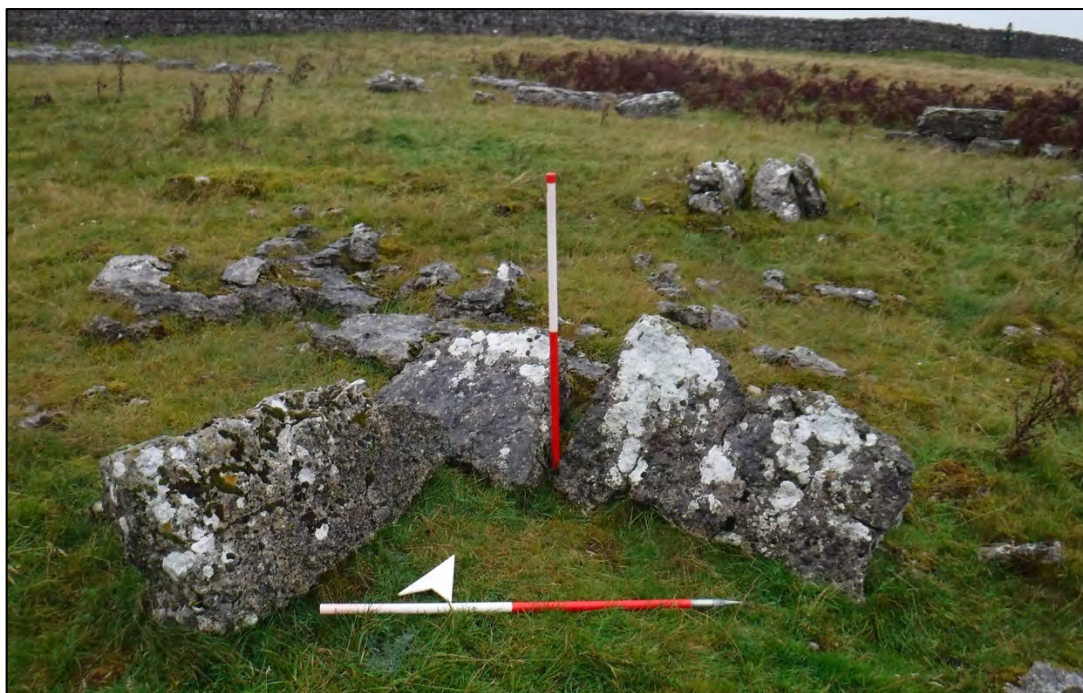
Miscellaneous structures

Shelters

- 5.31 Several small shelters were identified dotted across the survey area. These were generally located on top of the limestone pavement and were of a size to accommodate two or three people. Some, such as **D59** (Plate 21) and **L481**, were three-sided rubble-built structures; others, such as **H530**, **K667** and **A602**, were constructed of large stones, each big enough to form one wall of the shelter – in the case of **H530** and **K667**, these are orthostats (Plate 22). Other shelters, such as **C91** and **J227** were simply single rubble walls built on top of limestone pavement.
- 5.32 The function and date of these shelters remain unknown, although they may have been constructed to provide shelter to the quarrymen or wall-builders. Other structures may have been temporary shelters for shepherds during inclement weather. No discernible pattern of distribution across the Scar was identified to help indicate use and function. None were located in the near vicinity of quarries for example, although all were on the limestone pavement.



Plate 21: shelter D59 (looking west). The shelter is three sided and built of rubble.



*Plate 22: shelter **H530** built on the limestone pavement. Each stone is big enough to form one wall of the shelter.*



Plate 23: view down the long axis of the possible longhouse, looking south-east.

Other structures

- 5.33 A number of other structures were recorded with no clear indication as to their purpose or date of construction. Of particular interest were the remains of a building **B158** found at the top of the Scar (Plate 23) next to track **B157**. This rectangular structure was 17m

by 4.2m. Unlike other rectangular earthworks on the Scar, this featured a line of stones running down the centre, possibly serving as post-pads which might suggest a substantial, timber-framed structure such as a longhouse or barn. Longhouses are generally associated with hill farms and are largely absent from the lowlands (English Heritage 2006, 47). The site would certainly merit further recording and archaeological investigation.

- 5.34 Two other possible structures, **A588** and **M410**, were identified during the survey. **A588** was a sub-rectangular structure, c.2m wide and c.8m long with stone footings c.0.5m wide. It was located adjacent to a small shelter **A590** and may represent a sheepfold and adjacent associated shepherd's shelter. **M410** may also have something to do with livestock management. It was recorded as a rectangular structure, measuring 11.2m by 3.9m, with a pile of stones in the centre (Plate 24). It lies approximately 20m south-west of wall **M408**, which together with **M409** may represent an enclosure used for sorting livestock.



*Plate 24: **M410** is a sub-rectangular earthwork with a rubble centre, perhaps from the structure's collapse.*

- 5.35 Less well-defined and more nebulous structures were **M400**, **L493**, and **H528**. They were three small oval earthworks set in open grassland, averaging 4.5m wide with possible entrances to the north, north-east, and south-east respectively (Plate 25). These were all similar in form to four three-sided structures (**G334**, **K378**, **M410** and **L491**)

located in grassland, although slightly different in plan. **G334** and **L491** were both in a gully bottom, open to the east, and averaging 5.5m in length, situated close to what appeared to be modern linear tracks. **K378** was open to the north-west toward a gully and was located near hollow way **K379** and surface quarry **K350**, and may therefore relate to both.



*Plate 25: structure **M410** (looking south). The structure is three sided, opening north. Surveyors are located on two corners.*



*Plate 26: wall **G333** (looking north-east).*

- 5.36 Structure **J207** was a small earthwork, probably a hut, that utilised a hollow in the bedrock and was closed off on the south side by a small earthwork bank. This was probably domestic in function, featuring a small niche that appeared to have been modified for use as a fireplace or hearth.
- 5.37 Both on the limestone pavement and on the grassier lowlands, the remains of numerous walls (**B125**, **J252**, **A268**, **G330**, **M399**, **L480**, **H522**, **H527**) were recorded that pertained to no apparent field or area boundaries. Most of these relic walls survived only as rubble-based earthworks (Plate 26) that extended less than 15m on either on the limestone pavement or in grassland. The short length suggests they may be the vestigial remains of small enclosures or structures rather than field boundaries.

Historic field boundaries and walls

- 5.38 Numerous boundary walls and banks cross the Scar, relating to various phases of land enclosures, predominantly in the late-medieval and post-medieval period, although some may be much earlier. Many of the walls that are still visible were the result of late 18th- and 19th-century parliamentary enclosure, which had a significant impact on the landscape and carved it up into geometric fields characteristic of the area today. However, boundary banks, walls and markers were found during the survey that clearly pre-date the present field boundaries. It is usually notoriously difficult to accurately date such structures, except in terms of the sequence of construction in relation to each other.



*Plate 27: possible prehistoric boundary wall **D33** stretching north-east up to the crest of the hill.*

- 5.39 Probably the earliest linear boundary identified across the Scar was **D33**. Based on its form, this vestigial – or relic – wall may be prehistoric (Plate 27). It ran 150m primarily north-east to south-west and survived as a line of dispersed, grass-covered boulders, running into the limestone pavement to the east and fading downslope to the west. A 70m section of wall (**B141**) similar in form was identified crossing between two limestone outcrops in Zone B.

Sod-cast banks

- 5.40 Two sod-cast banks (**D109** and **B160**) were recorded, preserved as low earthworks c.3m wide and 0.3m high (Plate 28). A similar bank (**K367**), also c.3m wide but standing only 0.1m high, was identified stretching across two adjacent fields. Bank **K368**, in the very north-east corner of Zone K, ran parallel to **K367**, located c.90m to the south-west. It was only 20m in length, and was truncated by a later boundary walls and road at each end. The feature did not visibly continue into the adjacent fields, and is not shown on any of the historic OS maps. The proximity of **K367** and **K368** suggest they could be a remnant of a medieval strip field, although there was no visible evidence at surface of ridge-and-furrow cultivation in between.



*Plate 28: boundary bank **D109** (looking south downhill).*

- 5.41 A series of three roughly parallel banks were recorded on the northern edge of Zone J. Bank **J235** was a short section of earthwork bank running 30m north-east to south-west along a limestone outcrop. It comprised a low, semi-continuous earthwork bank, 3.5m wide and standing c.0.5m high. Banks **J246** and **J248** were shorter, measuring only 11m and 8m respectively. They were constructed of stone and soil, set 20m apart, running north-south parallel to the boundary walls of Zone J and 50m from **J235**. Together these may have formed part of a related field system.

Boundary walls

- 5.42 In terms of the survey, boundary walls were classed differently from boundary banks in terms of the amount of stone they contained, although frequently only the vestigial remains of both survived. Many of the relic walls recorded were sinuous and grassed over. Where stones were visible at the surface, these were generally large boulders.
- 5.43 In Zone M, three walls (**M405**, **M408** and **M409**) all ran at an angle to each other suggesting they were part of a planned field system and set out at the same time. **M408** and **M409** were low, poorly defined stony banks, only just visible among the grass tussocks. Each feature was less than 20m in length and set c.25m from the other. Another bank of similar construction (**M413**) was located 100m to the south, possibly relating to a separate enclosure.



*Plate 29: boundary bank **G351** forms a slightly sinuous, stone-based wall stretching north of the boundary wall from which the photo was taken.*

- 5.44 Other recorded field walls survived as low, curvilinear earthworks with occasional boulders visible (Plate 29). Sites **A265**, **G348**, **G351**, **G354**, **A578**, **A581**, **A592**, **A595** all fall into this category. The walls' distribution does not allude to a recognisable fieldwork pattern, and a number were on a different orientation from existing standing field walls.
- 5.45 The identification of relic walls across virtually all of the survey zones illustrates how land across the Scar has been sub-divided and used at different periods, and although it appears a 'natural' landscape today it has in fact been managed and altered by countless generations.

Boundary markers

- 5.46 Two lines of marker stones, some of which were erratics, were recorded crossing the Scar: one in Zone J, the other in Zone G. Erratics are large boulders of a rock type different from the underlying bedrock transported by a glacier during the last ice age, and left in situ when the glacier melted.



*Plate 30: boundary stones **G328** extend up the hill to the south-west.*

- 5.47 The line of boundary stones appears to relate to some form of land division or territorial boundary. This does not conform with any existing or known historic parish, township or ownership boundaries, suggesting a potential pre-medieval date. The stones recorded in Zone J were **J190**, **J194** and **J257**, all set in a line diagonal to the modern boundary wall. **J190** (HER 63543) was actually incorporated into a later enclosure wall. The other two stones (**J194** and **J257**) extend north on a line from this. A second boundary was identified in Zone G (**G324**) where a line of boulders extended up the hill, on a north-east to south-west alignment (Plate 27).
- 5.48 The First Edition OS map (1863) shows the Crosby Ravensworth Fell parish boundary marked in places by 'a pile of stones', which is a single cairn **N682** that is now largely overgrown with a few loose stones remaining (Plate 31). On the Second Edition map in 1899 these had been replaced by a standard parliamentary enclosure wall, the course of which rationalised the more meandering line of the former parish boundary.



*Plate 31: (right) cairn **N682**, the only remaining parish marker cairn; Plate 32 (left) 'thunderstone' **D20** located next to track **D21**.*

- 5.49 In Zone D, a 'thunderstone' (**D20**) is marked on the 1863 OS map (MYD 63346). This marked a reference point for an undefined boundary dividing the township of Raisbeck from Orton. In Westmorland, a thunderstone is a large glacial erratic boulder. The name possibly derives from a tradition that erratics of this sort formed part of a meteorite, hurled to the ground with thunder, or were deposited by giants in a mythological game

of pitch and toss. Whatever the origin of the term, the stones are prominent markers on the landscape and appear to have frequently been used as a reference point. They are often associated with prehistoric sites, the Great Asby stone being located c.1.4km north-east of Gamelands Stone Circle, and may have been seen as imbued with sacred properties in their own right.

- 5.50 Other walls were probably associated with features. Walls **D52**, **B60**, **J225**, **H310** were all aligned along tracks. Some of these, including **B60**, **J225**, and **H310**, may have been the remains of small shelters (Plate 33). Wall **D52**, which ran along the downslope side of a track, may have been a revetment. Wall **I295**, which ran along the south wall of quarry **I295**, may have been associated with a structure or a platform for working stone (Plate 34).



Plate 33: wall 310 running along track 311. Wall runs 10m along track and runs north (toward the horizon) for c.30m.

- 5.51 Walls **H308**, **G337**, and **G353** were all recorded across gullies, forming a dam or controlling waterflow. All were c.2.5m wide and rubble-built (Plate 35). Also possibly relating to water management, features **H561** and **J239** were both short sections of wall. **J239** was built of earth and located within a natural gully and may have directed water run-off to one side (Plate 36). **H561** was also built of earth and was located alongside a pond and may have been built to contain it (Plate 37). **I302** (Plate 38) formed an access route across a gully, but is now reduced to a sheep track.



Plate 34: wall I295 – looking south from quarry I296.

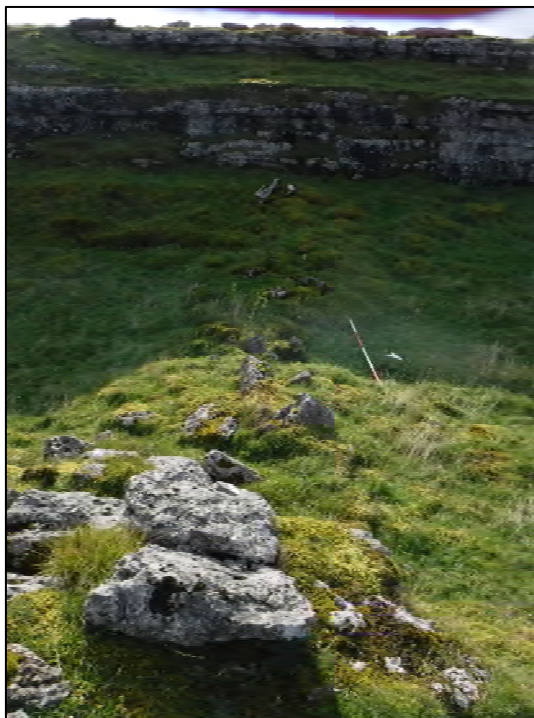


Plate 35: (left) wall H308 runs north-east-south-west across Tympany Gill. Plate 36: (right) mound J239 (looking south). The mound lies on one side of a drainage gully.



*Plate 37: (left) bank **H561** may have been built to contain the pond. Plate 38: (right) revetment **I302** (looking south).*

- 5.52 A relict wall was found at **D53** showing the typical external faces and internal rubble (Plate 39) of drystone parliamentary walls. However, **D53** does not appear on any version of the OS maps and likely pre-dates parliamentary enclosure.



*Plate 39: (right) wall **D53** looking south down the length of the wall. The wall is formed of large stones on the exterior of the wall with rubble infill.*

- 5.53 Two banks **H503** and **H548** (Plate 40) run parallel to the west boundary wall of Zone H and together may represent an earlier field division within Zone H. Further evidence for this field lies with the relict gate **H448** within the present walls which straddles the north-west corner of Zone H and the south-west corner of the adjacent field, indicating a longer field that extended north of the current Zone H.



*Plate 40: wall **H503** may represent a former enclosure wall running parallel to the west wall of Zone H.*

Parliamentary enclosure walls

- 5.54 During the medieval period, small areas of common land were lost through individual encroachments, and land continued to be enclosed by agreement over the subsequent centuries. The remaining land was then enclosed as a result of the parliamentary Enclosure Acts in the 18th and 19th centuries (Fig. 6). This process had a considerable impact on the landscape of the Scar, dividing it into geometric blocks in stark contrast to the patchwork of smaller enclosure and strip fields which characterise the lowlands (Whyte 2006).
- 5.55 Parliamentary enclosure had a significant impact on the landscape of the Westmorland Fells, seeing the construction of numerous walls stretching for miles across the landscape, with apparently little respect for the natural topography, in contrast to the

earlier boundary features. It marked the culmination of centuries of earlier enclosure through landowner agreement, gradual encroachment, and royal edict. The Enclosure Act walls, however, were distinctly different in character from earlier field and boundary walls. They were relatively uniform in construction, although varied regionally in style.

- 5.56 The walls on Great Asby Scar were built of locally quarried stone, without mortar, and comprised two faces with rubble infill, bound together with stones. The walls were usually tapered, to allow rain runoff, with a larger base and generally included a line of upright coping stones (YDNPA 2020). Associated with the walls were a series of related features including stiles, gates, hogg holes and smoots, although these can sometimes be found in association with earlier walls.



Plate 41: gate 1278 retains both of its stone stoups and appears to still be in use.

Wall furniture

Gates

- 5.57 The most common feature associated with walls were gates. A number of historic gate posts or 'stoups' survive across the Scar. These are large stone slabs often with hinge pins on one side and latches on the other. They varied in height but averaged 0.3–0.4m in width and stood 1–1.5m high. Some gates retained their stoups (**D51**, **B132**, **B162**, **1278**, **G325**, **M426**, **L440**) (Plate 41) while others had been replaced by modern

fenceposts, although the stoup was extant. Others (D31, D39, D42, J184, G313, K374, H446, L468, B156) had only a single stoup remaining. In the case of D40 the stoup was located 1m away from the modern gate. Some gates had been replaced entirely but were recorded during the survey as it was likely they were in the location of a historic gate.

- 5.58 Where access to a field had changed, relict gates were visible as infilled sections in standing walls (D28, C81, K376, H448, K465, L470, the gate posts sometimes surviving in situ). This may have occurred when there was a change in landownership and access between two fields altered.



Plate 42: hogg hole C73 is still in use. The stone slab has been set aside to let the yearlings through.

Hogg holes

- 5.59 A number of hogg holes (or sheep creeps) were recorded in association with the parliamentary enclosure walls. A hogg or hogget is a young sheep, less than a year old. Hogg holes are rectilinear openings included along the base of a drystone wall during construction to allow sheep to pass between two fields, while preventing access for larger stock. When not in use, hogg holes are often blocked with a stone slab (D35, C73, C85, B195, L427, L474, N704) (Plate 42). Many of those recorded were in poor

condition and partially collapsed (**D30**, **D45**, **D49**, **B120**, **J233**) or had been blocked with a later fence (**H305**). Several others, **D57**, **C77**, **K461**, had been completely blocked and filled in.

Smoots

- 5.60 Similar to hogg holes but smaller, several rabbit smoots were recorded. Rabbit (or hare) smoots sometimes feature a pit and trap at the base to capture an animal for eating. No smoots with traps were present on the Scar. Some smoots, **K466**, **L484**, remained open and may still be in use. Others, **L428**, **L429**, **L430**, **K463** had partially collapsed (Plate 43). With the exception of **K466**, all of the smoots found were along the boundary of Zone L. It is important to note that smoots, being small and at the base of walls, are often overlooked and there could be others associated with the adjacent fields which were not recorded.



*Plate 43: smoot **L429** – looking south from the road to Great Asby.*

Step stiles

- 5.61 No squeeze stiles were found on the Scar, but eight step stiles were recorded. Many of these were along routes no longer used, such as **D27**, **J238**, and **K645**. In some cases, these routes did not appear on either modern or historic OS maps, such as at **D58** associated with track **D22**. Other stiles survived as evidence of former access routes,

for example **G326**, a four-step stile associated with footpath **G331** visible on the First Edition and modern OS maps. However, the current Right of Way had been diverted through gate **G325** 100m farther north. Only two stiles, **C67** and **J196** (Plate 44) were on current access routes. The missing step of **J196** suggests it is no longer in regular use.



*Plate 44: step stile **J196** with the edge of gate **J184** visible in the far left of the photo.*

Water management

- 5.62 A number of culverts were recorded, directing or channelling water away from an area or feature. The culvert **M422** potentially pre-dates the construction of the current road to Great Asby and has since undergone modern restoration. On the north side were two stone-built culverts (Plate 45) replaced on the south side by modern concrete pipes matching the concrete revetment supporting the road.
- 5.63 Drainage ditches were also observed, often built to manage the course of water around industrial sites. The ditch **K608** lay 30m west of adit **K606**. The direction of the ditch appeared to follow that of the adit and may have been created to funnel water away from the adit below. A similar ditch was built at **K669** and was likely constructed to divert water from the escarpment away from the deep quarry **K670** (Plate 46).



Plate 45: south side of the revetment and culvert M422.



Plate 46: ditch K669 – looking west, uphill toward quarry K670 (just out of view).

- 5.64 Ditch **K373** led away from quarry **K372** straight across Copper Mines Lane where it appeared to continue into the next field and may have drained into Tympany Gill (Plate 47). Similarly, **K462** crossed under the modern boundary wall into Zone L and appeared to continue north of Zone L to adjoin another drainage or irrigation gully at the top of Zone K. These features were very straight, and in the case of **K373** featured upcast banks up to 0.5m high, suggesting they carried water. It is uncertain why such drainage works were required.



*Plate 47: drain **K373** – looking east away from quarry **K372** toward Tympany Gill.*

Agricultural features

- 5.65 The earliest evidence of agricultural activity on the Scar dates to the Bronze Age, the two cairnfields recorded in Zone B (**B122** and **B123**) suggest land was being cleared during this period for cultivation. The landscape has continued to be managed for agricultural production ever since, although predominately for grazing rather than arable cultivation, except on the lower slopes. The number and wide distribution of enclosures, sheepfolds, hogg holes and other features associated with stock management across the area provide some indication of the extent and intensity of grazing across the Scar, especially during the post-medieval period.

- 5.66 The landscape of the fell as it appears today may even be largely the result of overstocking in the past resulting in areas of soil erosion, exposing the underlying limestone pavement. This probably relates more to the grazing of cattle rather than sheep, which were kept on the Westmorland uplands in much greater numbers during the medieval period (Winchester 2000). The weight of the beasts, especially in wet weather, would have probably resulted in damage to the thin soils covering the Scar. The impact of overstocking was illustrated quite recently when government subsidies on livestock were paid by head rather than acreage. Since subsidies have been introduced based on land use and not quantity of livestock, vegetation cover across the Scar has improved significantly (Jan Hicks, LAS. pers. comm.).



Plate 48: sheepfold N703 is visible on the 1863 OS map but is no longer in good condition.

Livestock pens

- 5.67 Many of the enclosures recorded across the Scar almost certainly relate to the management of livestock. Some of these were associated directly with sheiling sites (discussed in paragraphs 5.22–5.28) which themselves are difficult to date, except to say that they pre-date 18th and 19th century enclosure.

- 5.68 At the southern end of Zone N, the First Edition OS map shows a 5.7ha intake referred to as 'Pickering Close'. This may date to a phase of early 17th-century enclosure when the Pickering family held Crosby Ravensworth. This intake (**N705**) is still intact and contains two abutting sheepfolds, one inside (**N707**) and one outside (**N703**) near the only access gate (**N706**) into the enclosure (Plate 48). The walls of the intake are rubble built and of rougher construction than the nearby boundary wall, implying it is older and has not been maintained as recently (Plate 49).
- 5.69 Pickering Close may be a stinted pasture, although its location, at the meeting point of the three township boundaries, suggest it may have served as a pinfold. This would have been used for holding animals that strayed across the common land boundaries until claimed by their owners. Pinfolds are usually found close to the edge of villages but, given the proximity to the three townships, it may have been prudent to have one on the moor. Alternatively, this was a stock compound associated with droving, although located some distance from both of the primary routes across the upland.



Plate 49: the west side of Pickering Close (N705) with the gate (N706) visible.

- 5.70 There are many other smaller enclosures on the Scar that incorporate the limestone pavement in their construction, some of which appear similar in form to the recorded sheilings. A number of these, such as **B174**, had internal divisions while others, such as **B178**, **J191** and **K657**, were single enclosures built using the natural limestone escarpment (Plate 50).



*Plate 50: enclosure **B178** – looking north-west along the limestone outcrop.*



*Plate 51: (left) wall **B169** running between outcrops. Plate 52: (right) wall **D17** runs south down from the Knott, past a small limestone outcrop and fades into the grass below.*

- 5.71 Further along the Scar in Zone B, structures were observed built into the limestone pavement, serving to isolate expanses of grass between outcrops to form pens. Similar structures were found further east at Little Asby by Oxford Archaeology North (OAN 2004). These were likely livestock enclosures, pens, and boundaries pre-dating parliamentary enclosure. **B140** comprised a short wall built against the limestone pavement, paralleled by a second wall (**B134**) c.40m away, which closed off a section of grass between outcrops to form a sub-rectangular livestock enclosure.
- 5.72 In some instances, only a single wall was observed, located between two sections of limestone pavement which formed the other two sides of the enclosure. In the case of **D17**, **B152**, **B155**, **B169**, and **A589**, there may have originally been another section of wall that would have blocked the other end enclosure, alternatively a hurdle or fence might have been placed across the opening (Plate 51). Site **D17** was peculiar in that it did not appear to run the whole length between escarpments and may have contained a small structure (Plate 52).



*Plate 53: enclosure **G331** is formed by a low rubble earthwork, consisting mainly of boulders. The large erratic marks the entrance to the enclosure. The edge of the limestone pavement in the upper left is the south-west corner of the enclosure.*

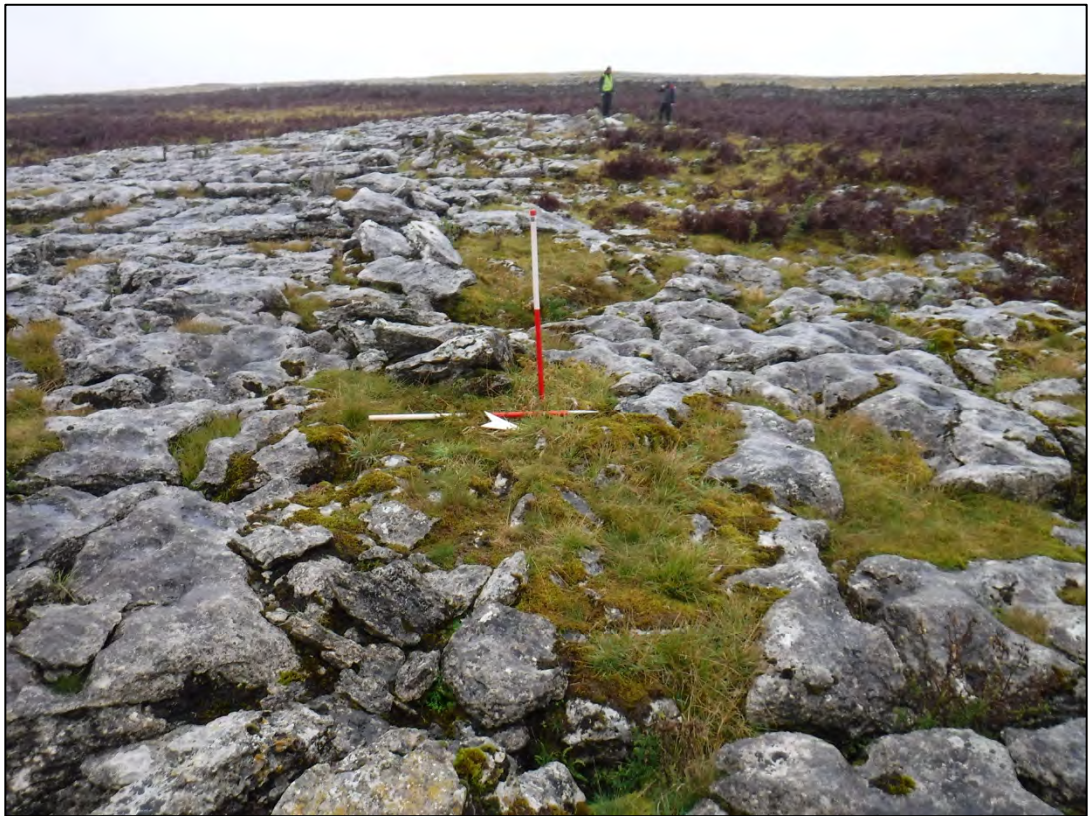
- 5.73 Other potential livestock enclosures on the Scar were separate from the limestone

pavement, and visible as earthwork remains. A rectangular enclosure with curved corners was found in Zone A (**A583**), bounded by a steep slope to the north. It was 33m long, formed by a low earthwork 0.2m high with a possible entrance to the south-west. A similar polygonal pen (**G331**) was recorded, built against a small outcrop of limestone pavement which formed the south wall of the structure. A line of stones placed on the pavement may have been a relict south wall, although it could have been natural. There may also have been a smaller structure adjacent on the east side of the feature. The enclosure was entered from the north, where a gap in the earthwork was marked by a large erratic (Plate 53).



*Plate 54: two sides of the hexagonal enclosure **G321**.*

- 5.74 Site **G321** was a hexagonal enclosure constructed across a gully, located c.250m north of **G331**. The walls of the enclosure were rubble-built, and discernible only as a low earthwork with occasional large boulders, enclosing an area c.40m by 30m. The north (down-stream) wall of the enclosure was built of stone and stood up to 2m high, forming a dam across the water flow. This was possibly a washfold of some form, and was the largest complete enclosure found on the survey area (Plate 54) aside from Pickering Close (**N705**).



*Plate 55: the south enclosure wall of site **L482**. The wall consisted of a line of large stones on the limestone pavement.*

- 5.75 A possible enclosure and structure (**L482**) was identified at the eastern end of Zone L, truncated by a later field wall. The large (c.40m by 20m) enclosure comprised a wide stone-based earth bank extending north and east from the limestone pavement. On the south end of the pavement a rubble wall extended from the pavement toward the field boundary where the earthwork continued into the adjacent field (Plate 55). There was a possible entrance on the south side, marked by a 3m gap in the wall (Plate 56). Beside the entrance was a small (c.1 by 1m) square structure. If the full extent of site **L482** were extrapolated, it would have been much larger than the other enclosures recorded during the survey, but was unfortunately incomplete. It was different in construction from other enclosures, the wide bank being quite distinctive. In the south-west corner of the site was a tall (c.1.45m) stone setting (**L483**) visible from several hundred metres away, although it is uncertain if it related to **L482** in any way. Further investigation would be required as to the nature and use of this enclosure and adjoining structure.



*Plate 56: the possible entrance to site **L482** is marked by a 3m gap in the wall beside a structure to the west (right of photograph). A tall stone setting (**L483**) is in the south-west corner.*

Sheepfolds

- 5.76 The post-medieval period also saw changes in animal husbandry, as sheep farming increased in economic significance and flocks grew larger. Enclosure by agreement also brought about the gradual decline of the infield/outfield system, and by the mid-18th century many head dykes had been breached or dismantled and their stone used in the construction of field walls. Stock-proof walls also reduced the need to have a constant presence on the uplands monitoring the livestock, bringing an end to transhumance and the sheiling system. Corresponding with this was a rise in the construction of sheepfolds and bields to provide shelter and protect the animals left out to graze the fell (NAA 2017).
- 5.77 In the 19th century, sheep pens were built against the parliamentary enclosure walls. These are marked as 'sheepfolds' on historic OS maps. These were generally small pens used for holding or sorting sheep. Some of the previously discussed enclosures may have served a similar function, but are different in style and period. Several sheepfolds were found on the Scar in various conditions. Some, such as **B104** and **A580**, were rectangular earthworks no more than 0.3m high built along a field wall. The same is true of **D38** and **H542**, both of which appear on the First Edition OS map (1863). These survive only as earthworks.

- 5.78 Examples of standing sheepfolds were **C76**, **B166**, **A255**. These were often in the corner of a field, either built into or against the existing parliamentary enclosure walls. Sheepfold **A255** was of interesting construction, comprising a curved wall built against the wall forming the corner of Zone A. The structure did not directly abut the boundary wall, but wooden posts on either side indicate the former location of gates on either side to enclose the sheep (Plate 57).



*Plate 57: sheepfold **A255** (looking north-east). The sheepfold is composed of a single wall in a field corner forming a triangular sheepfold.*



*Plate 58: sheepfold **H307** is the only free-standing sheepfold. It is square with several other walls extending out to the (south-east (left) and north-west (right)).*

- 5.79 Site **H307** was the only free-standing sheepfold. It was a square, rubble-built structure 1.75m high. Three stone walls extended from the main structure in different directions, indicating there may have been further associated enclosures. It is marked on the First Edition OS map, similar in shape to its current appearance (Plate 58).

Bields

- 5.80 Sheep bields were designed to provide shelter for sheep on an exposed fell rather than to enclose a flock. They were usually X- or Y-shaped, although those found on the Scar generally comprised just a single wall, curved so that they opened downwind, to protect any sheep huddled against them. Only two bields out of 11 did not conform to this design, both in Zone A.
- 5.81 Bields **A575** and **A271** were the only extant bields. **A575** consists of a long wall, oriented north-south abutting a limestone crag. The combination of crag and wall created an L-shaped shelter. Very different in style was bield **A271**, marked on the First Edition OS map (1863) as a Y-shaped wall with the long section extending north. It culminated in a small structure (Plate 59). The bield stood 1.7m high.



*Plate 59: bield **A271**, photograph taken looking south-east from the rectangular structure in the foreground to the Y-shaped fork in the wall in the background. Plate 60: bield **D14** (looking west).*

- 5.82 Other bield found on the scar had been reduced to rubble or faint earthworks. Some of these (**M406**, **M407**, **M412**, and **N686**) were extant at the time of the First Edition OS map (1863, surveyed in 1858) but have since been lost. Sites **D14** and **B113**, both curvilinear rubble wall footings, are likely ruinous bields (Plate 60). An L-shaped rubble earthwork (**J251**) was located c.30m from a bield marked on the First Edition OS map. These historic bields no longer exist, likely eroded away by cattle around the feeder placed at the site. The rubble earthwork **J251** may be the remains of the feature.

Field clearance

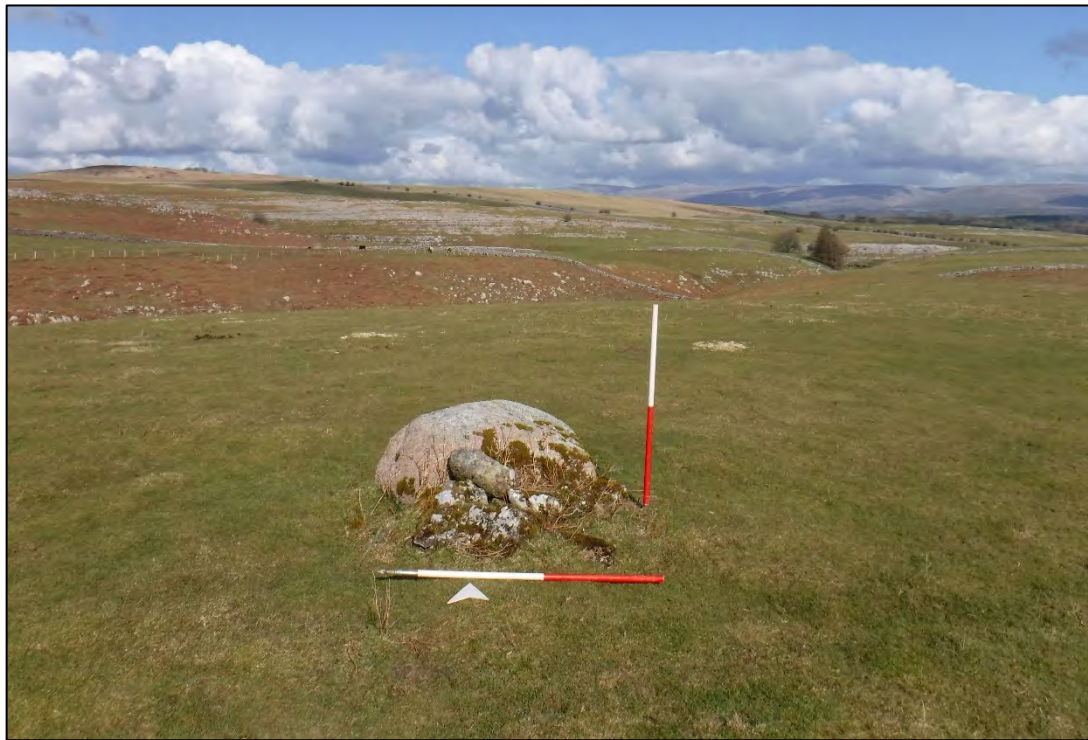
- 5.83 Clearance cairns associated with the Bronze Age deforestation of the uplands have been discussed in paragraph 5.7. However, over 80% of the clearance cairns recorded during the survey were quite substantial in size and located either on the edges of fields along the boundary walls, or on the limestone pavement, and may date to a later phase of land improvement. Some of these (**J212**, **G343**, **G344**, **G364**) were located along tracks, suggesting the area had been cleared to make way for the track.



*Plate 61: clearance cairn **G352** (looking north-east). It is located at the bottom of a gully.*

- 5.84 Although examples were found across the survey area, there was a concentration of clearance cairns recorded in zones G and H. The fields in these areas consisted of broad glacial gullies extending down from the limestone pavement, creating a grassy peninsula on the edges of the pavement. These areas may have been cleared in the post-

medieval period for grass or hay production. There is no indication of cultivation across the area today, although it remains grassland. The two zones were dotted with clearance cairns, which appeared by their size and composition to date to the post-medieval or even modern periods. Some of these (**G336**, **G347**, **G352**) were very large and oblong, comprising piles of small stones, the cairns were up to 1.3m high and 1.5m in length (Plate 61). In other instances (**G335**, **H499**, **H500**, **H501**, **H505**, **H556**, **H558**), smaller stones had been piled around an erratic; the larger stone being difficult to move (Plate 62).



*Plate 62: cairn **H558** was built around the existing erratic.*

- 5.85 In Zone G, four cairns (**G346**, **G362**, **G363**, and **G364**) were all found within a 100m² area (Plate 63), with the potential for further cairns concealed by the bracken, creating a post-medieval cairnfield. Two similar cairnfields were located in Zone H. The first featured six cairns (**H496**, **H497**, **H498**, **H499**, **H500**, **H501**) and was set above a broad valley, the second also comprised six cairns (**H549**, **H550**, **H553**, **H552**, **H551**, **H555**) and was located on the bracken-covered side of a hill. Cairn **H555** was located in an area of clearance where, in general, stones had not been piled in a mound but rather placed along the edge of the limestone pavement.



*Plate 63: cairn **G363** is part of a larger cairnfield with cairn **G362** visible to the north (rear).*

Industrial activity

Quarrying

- 5.86 Great Asby Scar has long served as a source of local building stone, and 17% of the overall sites recorded during the survey were quarries. In general, it was difficult to date these, except in a few cases where location or associated features provided an insight into their purpose and period. The Scar would have provided an obvious source or relatively easily accessible limestone for both lime burning and building construction. Most of the houses in the surrounding villages, such as Orton, are built of locally sourced limestone. No quarries are specifically marked on any of the historic OS maps, but sizeable worked faces were identified during survey. The majority of the sites recorded were probably post-medieval in date, although some may be earlier. For example, quarry **C70** was located 15m from burial mound **C69** with no other quarries nearby. The solitary location of the site, and proximity to the mound, suggest it could have been a source of stone for the burial cairn.
- 5.87 Most of the quarries on the Scar likely date to a period of increased building and agricultural improvement in the late 18th and 19th century. A considerable amount of

stone would have been required to build the parliamentary enclosure walls that divided the former common land. Stone was heavy to carry and transportation difficult, so sourcing material close to the point of build was an important consideration. Small quarry pits along the course of boundary walls were found across the area, too numerous to record individually. These were usually simply small depressions in the ground, sometimes with a small bank of upcast spoil. For example, **C71** and **D72** were lines of small pits that ran along both the east (**C71**) and west (**D72**) side of the same boundary wall (Plate 64). In other cases, these depressions were isolated, forming a single pit beside a boundary wall and clearly related to construction.



*Plate 64: a series of quarries (**D72**) line the wall and were used for its construction.*

- 5.88 In the case of **J250** and **J281** no quarried depressions were found, but the spoil heaps and hummocky terrain were indicative of disturbed ground adjacent to boundary walls.
- 5.89 Elsewhere, larger quarries were dug adjacent to walls, some of which featured an exposed working face, usually at a right angle to the wall (**D43**, **I279**, **I280**, **I291**, **L433**, **L437**, **K455**, and **K456**) (Plate 65). Some of these, such as **I285** and **K456**, were associated with large spoil heaps indicating significant activity. At **L436** a set of five small depressions suggested the location of quarries around a central access ramp

(**L435**) built above the limestone pavement (Plate 66). A similar access ramp was recorded at **K375**.



*Plate 65: quarry **K456** is cut at right angles, with a spoil heap to the south-east (right).*



*Plate 66: looking from quarry **L436**, is a wide ramp (**L435**) across the limestone.*

- 5.90 Quarry **K452** was located along a limestone outcrop parallel to the north boundary wall. Significant activity was recorded along the outcrop, including a series of spoil heaps and associated square platforms which may have been used to sort and dress the stone (**K451**) (Plate 67).
- 5.91 Other quarries were located away from the boundary walls, with several small quarries cut into the hillside (**B110**, **J229**, **M417**, **K453**, **H540**, **H546**) or large quarries with clear quarried faces and several related quarry pits (**J230**, **I290**, **I296**, **L432**, **L442**, **L490**). Most of these showed no surviving evidence of an access track for transporting material away. An access track is shown on the First Edition OS map (1863) associated with both **L432** and **L490**.



*Plate 67: platform **K451** located within the spoil heaps of quarry **K452**.*

- 5.92 Quarry **K613** was located 10m away from a large stone at **K614** propped up by two stones. This was located at the head of track **K615** and may have served to mark the location of the quarry. An even more prominent marker stone was found at **N712** (Plate 68) which contained two stones, placed in front of each other at the entrance of the quarry. These stones had holes drilled into them and had possibly once held an iron bar or similar item (Plate 69). It is unclear whether these were reused from elsewhere or were cut in situ.



*Plate 68: (above) quarry **N712** with the marker stone on its left (north) side. Plate 69: (left) marker stone of quarry **N712** with holes cut in both stones.*



*Plate 70: quarry **M424** – looking north toward the road to Great Asby, which can be seen in the distance on the left.*

- 5.93 Stone would have been transported by cart or packhorse off the Scar, and many of the quarries are adjacent to tracks. In the north field of Zone K, several tracks (**K382**, **K383**, **K385**, **K387**, **K389**, **K391**) criss-crossed the limestone pavement connecting a number of small quarries (**K380**, **K381**, **K386**, **K390**) in the area. **K389** appears to have used the remains of a spoil heap (**K390**) as a revetment. Stone from the quarries provided aggregate for the larger tracks, and on the north side of Zone M stone from the nearby quarry (**M424**) was used to build the road to Great Asby (Plate 70).



*Plate 71: quarry **K672** – looking over the quarried outcrop toward upcast bank that surrounds it.*

- 5.94 Two quarries were particularly notable for their depth and shape. Quarries **K670** and **K672** were c.2m deep and D-shaped with a quarried face that was excavated downward, with the upcast forming a semi-circle around the quarried face (Plate 71). Given the proximity to **K671**, these features were recorded as quarries. However, they appear similar to open-cast mines found in the Lake District (NAA 2018). The presence of mining nearby at **K606** and **K643** may support this hypothesis and would warrant further investigation.
- 5.95 Natural limestone outcrops were widely quarried as an easily visible source of stone. The working faces were cut at right angles to each other (**A577**, **J209** and **K372**) (Plate 63) with a flat platform in front where material would be worked (Plate 72). In the case

of **C84**, a large grike had been excavated, forming a square quarry with an exit to the west (Plate 73). Large, imposing, natural outcrops such as the Knott (**D8**), Cowman's Scar (**J209**), Great Kinmond, (**A577** and **A587**) and Andrew's Scar (**K372** and **K375**) would have been an obvious source of stone, and there is ample evidence of their exploitation. Some of these natural outcrops (**K671**) had very large stones (3m by 2m) that had been extracted and abandoned.



*Plate 72: platform at **K372**, one of the quarries at Andrew's Scar.*



*Plate 73: quarry **C84** (looking east from the entrance) showing that the boundary wall clearly drops down into the grike.*



*Plate 74: (upper left) quarry **K613** cut into the limestone outcrop.*

*Plate 75: (above) quarry **K617** is similarly cut to **K613** and **A587**.*

*Plate 76: (lower left) quarry **A587** is a large cut into one of the crags of Little Kinmond.*

- 5.96 Quarries **A587**, **K613**, **K617**, and possibly **K639**, were all rectangular in plan, cut into the hillside at a width of exactly 2.4m (Plates 74–76). These were all similar in style, with rectangular cuts directly into the outcrop. It is not known why 2.4m was an important width, but the similarity in size is noteworthy. One possibility is that the quarry was producing stone for gateposts or lintels that were cut to size on site (Douglas Mitcham, pers. comm.)

Lime kilns

- 5.97 A significant proportion of the limestone extracted from the Scar was burnt to produce quicklime. This had many uses including as a component of building mortar, a flux in iron smelting, an ingredient in whitewash, and as disinfectant. It was also used in industrial processes such as iron smelting, tanning, bleaching, glass manufacture and paper making. One of its most common uses was as an agricultural fertiliser. Applied to fields as quicklime and left to self-slake, it increased the pH value of acid soils, breaking down the heavy clays into a more friable texture (Bell 2000).

- 5.98 Limestone was burnt in lime kilns to produce quicklime. The earliest type of kilns used to burn lime were known as sow, or clamp kilns. Unlike the later masonry-fronted structures, sow kilns were made of earth. They survive in the archaeological record as a shallow penannular depression (Kingsbury 2019). Such kilns were often located on a manorial estate – where they were larger and kept in constant use – or in fields. Field kilns were generally temporary structures, running for only a few weeks, to burn lime for spreading on either newly cultivated or previously fallowed fields (Johnson n.d.).



Plate 77: the north sow kiln K370 (looking west).

- 5.99 Two possible sow kilns (**K370** and **K371**) were located in the north-east corner of Zone K, not far from the quarries at Andrew's Scar (**K372** and **K375**). The north kiln (**K370**) was better preserved, visible as a round earthwork measuring 6.8m in diameter with an internal depression measuring 2m in diameter and no obvious entrance (Plate 77). **K371** was a sub-rectangular platform with stones set in a U-shape extending east and was possibly a second kiln that had collapsed eastward. Another rectangular, raised platform (**K369**) was located 20m to the north-west and was possibly associated with the kiln, although of unknown function.
- 5.100 Larger, masonry-fronted kilns were introduced in the late 17th century, and by the 18th century were commonly being used. This was a period of considerable agricultural expansion, which saw two million acres of land brought into cultivation across the country between 1790 and 1810. This was predominately to feed the burgeoning urban industrial centres, including the cities of Manchester, Liverpool, Salford and Carlisle (LUAU 2000; McElvaney 1993, 41).

- 5.101 The later masonry-fronted lime kilns were roughly square in plan, wide at the bottom and tapering toward the top. They were usually built into a hillside or quarry floor to allow easy charging from above and emptying below. At the lower level were one or two draw arches, which were either round or pointed. The kiln was charged at the top with fist-sized chunks of limestone, layered with low grade coal or charcoal, and then fired. The burnt lime then dropped to the bottom and was raked out at the base. By the late 18th century most kilns were in continuous use and regularly charged with fresh stone and fuel (LUAU 2000).



Plate 78: this quarry pit is one of the many pits, faces, and spoil heaps of quarry D1.

- 5.102 The large quarries at the Knott and Cowman's Scar are all also associated with lime production. Just outside Zone D, and not included in the survey area, was a lime kiln (HER MYD62663) associated with quarries **D8** and **D1** (Plate 78). The latter was a substantial quarry which included several pits and spoil heaps, located just the other side of the gate (**D4**) from the kiln. A second lime kiln was recorded in Zone J, adjacent to quarry **J240** (Plate 79).



Plate 79: lime kiln J241 is built into the hillside of quarry J240 and opens to the west.

Surface quarries

- 5.103 Several surface quarries were found on the Scar which were different in character from the industrial quarries previously discussed. These features were associated with the removal of only the upper bed of the limestone pavement, often creating a wide corridor of extracted stone. An example of this was found at **D54** and **D55** where several spoil tips were recorded. The spoil largely comprised small stones and fragments of rock, suggesting that larger stones had been retained leaving the related discarded material (Plate 80). Further evidence was found at quarries **K350** and **G360** where small amounts of spoil were found in association with cut 'corridors' in the pavement, c.3.7m wide and 20m in length (Plate 81). Quarry **G360** also contained a pile of large boulders that had been removed and placed together in the centre of the limestone pavement (Plate 82).
- 5.104 Other examples included quarries **H529**, **K629**, **K660**, **K661**, **N690**, **N694**, and **N708**. In some cases, such as **N690**, the associated spoil tips were very large, measuring 10m by 15m and up to 1m high (Plate 83); others comprised just a few small stones, measuring only 1m by 1.5m and 0.3m high (**K660**). These were perceived to be different from clearance cairns because the stones were usually small and angular, showing that they had probably been produced as spoil from quarrying rather than placed together.

These were also located near quarries on the limestone pavement rather than being on the edge of grassland.



Plate 80: large spoil heaps of small stones found in quarry D54.



Plate 81: a narrow corridor of stone cut into the stone at G360.

- 5.105 Two of the volunteers on the survey suggested that stone from some of these areas may have been quarried to provide material for rockeries. These had become a popular

garden feature among the gentry in the early to mid-19th century, inspired by the rugged 'natural' landscapes of the Romantic movement, coupled with the increased interest in botany and collection of plant specimens from across the globe. By the early 20th century, the fashion for alpine rockeries was more widespread, appearing in domestic gardens up and down the country, leading to an increased demand for stone. The readily available limestone outcropping across the Scar perhaps provided an ideal source for this purpose, which may partially explain the surface quarries.



Plate 82: pile of stones left behind at a possible rockery quarry G360.



Plate 83: volunteers measuring the spoil heaps of N690.

Mining

- 5.106 Copper mining was an important industry in Cumbria for a couple of centuries, beginning in the 16th century when extensive mines were founded by the Mines Royal Company at Coniston, Greenhow and Tilberthwaite among others. It was less prevalent in Westmorland, although the Company is recorded as holding interests in the county in 1694 (Murray *et al.* 1961, 255). One of the last mining operations recorded in the region was the late 18th-century mine opened by the Union Company of Copper Miners on the north side of the survey area, just south of Andrew's Scar (Mannex 1849, 139).
- 5.107 The ore recovered from the mine was of an inferior quality and in 1811, operation at the site had ceased (Lewis 1811, 17). However, in 1829, Parson and White's *Directory of Cumberland and Westmorland* states that the 'Union Company of Copper Miners are now working a mine in this parish, where they have found some excellent copper ore' (Cooper n.d.). This mine apparently remained in operation until at least 1840 (*ibid.*) It is uncertain if these references all relate to the same mine. Over the course of the survey, two separate mines **K606** and **K643** were recorded near Copper Mines Lane. However, there are also documentary references to prospecting for copper near the Crosby Ravensworth and Asby Windermere parish boundary in 1705 and 1745 (*ibid.*).
- 5.108 A single mine (**K606**) is described on the HER as comprising 'a copper mine consisting of a shaft with vaulted roof, airholes, adit/drain and spoil dump but with no viable access from the surface' (HER 63214). This description likely describes the adit and drainage ditch found at **K606** and **K608** respectively. Adit **K606** was still intact, composed of an arched passage, now partially blocked, forming an entrance 1.1m high by 1.1m wide. Beyond the entrance, the adit was tall enough to stand in and appeared to continue toward the south-west. A hollow way **K605** stretched east from the adit toward gate **K604** (Plate 84). The low pile of stone **K609** and mound **K610** are probably the spoil mentioned in the HER description. This mine is depicted on the First Edition OS map (1863).
- 5.109 Above the mine, across the limestone pavement, 23 (sites **K643A-W**) separate earthworks were identified related to mining. The most significant of these was **K643H** which consisted of a linear ditch culminating in a short adit 5m long, 1.6m high and only 0.5m wide (Plate 85). The other earthworks were most likely bell pits of various sizes averaging 5–6m in diameter, characterised by a round pit up to 1m deep surrounded by a circular earthwork bank (Plate 86). Several linear depressions, **K643Q** and **K643V** extended out from the bell pits.



*Plate 84: (left) adit **K606** located at the end of hollow way **K605** Plate 85: (right) small adit at **K643H**.*



*Plate 86: bell pit at **K643E**.*



*Plate 87: volunteers standing beside bell pits **K643I**, **K643J**, **K643K**, and **K643L** as seen from bell pit **K643G**. The right-most volunteer is standing in front of adit **K643H**.*



*Plate 88: rubble-filled circular earthwork of **J193**.*

- 5.110 There are also documentary references to copper trial soundings across Orton Scar (Lewis 1811, 17) which may be those recorded in Zone J. Several bell pits and disturbed land were found at **J193** and **J189** at the base of a limestone escarpment along track **J185**. At **J193**, five small potential prospection pits were found consisting of round earthworks with a central depression, now filled. Most of these comprised a central pit, with upcast from the excavation creating circular surrounding earthwork with a 6.1m

external diameter and 1.9m internal diameter. One feature varied slightly, comprising an elongate hollow with rubble infill. This may have been a collapsed shaft (Plate 88). There is no documentary record of mining in Zone J, but the activity recorded is likely to be associated with copper mining, similar to mine **K606**, 2km away.

- 5.111 A possible large bell pit (**J189**) was recorded on the north slope of the Scar in Zone J and is shown on the First Edition OS map (1863) as a 'Pile of Stones'. Unlike the smaller pits in **J193**, this feature measured 13.5m wide, the banks stood 1.2m high with a central depression likely formed from the upcast. Its sheltered location, at the base of a hill in a broad valley (Plate 89) and being at the side of a track, suggest it is a bell pit rather than a burial cairn despite its size. However, further investigation would be warranted.



*Plate 89: volunteers standing on feature **J189**. The photo was taken from the track **J185** looking east.*

Peat cutting

- 5.112 Evidence of peat cutting was found south of Gaythorne Plain. A rectangular depression (**N685**) was identified, measuring 11.4m by 8.7m and 0.2m deep, with the sides cut at right angles to each other on the north side, with a diagonal boundary on the south side (Plate 90). This odd shape may be due to differential erosion, but what is surprising is that the diagonal southern boundary of the peat cutting matches exactly with the old parish boundary between Crosby Ravensworth and Asby Windermere (Figs. 4 and 21). Documentary evidence of peat cutting along parish boundary is mentioned in a

boundary dispute dating to the 1830s, in which John Clemmett, bailiff to the lord of the manor of Asby Winderswath, claimed that the people of Asby had ancient turbary rights along the boundary between Linghillo and Pickering Close, claiming he had cut turf there 'without interruption for this 50 years' (Cooper unpublished). Evidence of further cutting near this boundary was found near **N685**, but was less well defined.



*Plate 90: peat cutting **N685** (looking south). The old parish boundary runs near the edge of the heather, just at the end of the cutting.*

- 5.113 **N713** and **N715** were two further potential peat-cutting sites. They comprised rectangular trenches cut in the moorland, both 0.2m deep and measuring 10.8m by 2.9m and 4m by 4.9m, respectively. There is no documentary evidence associated with these, although they may mark the location of peat cutting for the Crosby Ravensworth parishioners. Both were located beside tracks – **M423** and **M396** respectively – which would have allowed for easy transportation.

Transport

- 5.114 The large number of archaeological sites recorded on Great Asby Scar during the survey indicates that people have lived and worked on, or near to, the Scar for hundreds of years, using various routeways to travel across it. Some of these remain as prominent public rights of way today, clearly visible on satellite imagery, such as **D7**, although many have deviated from the paths shown on the First Edition OS map (1863). Track

M396 deviated from the mapped track by 200m and track **M423** by 60m. In the case of **G316** the public right of way had been relocated to accommodate a new gate; similarly, stile **G326** had been replaced by gate **G325**, altering the route of the public right of way slightly. This was not the first time this particular Right of Way had been altered; the hollow ways **G320** show two different routes toward the present wall.

- 5.115 Evidence of continuing changes to access routes across the Scar is illustrated by a comparison of past and present tracks. Some of those visible on the First Edition OS map remain in use but are not marked on the modern OS. **J183**, **J185** and **L469** all followed historic tracks, whereas those serving quarries **L432** and **L490** no longer exist.
- 5.116 More common were unmapped tracks. Of these, **H510** and **K377** were faint and transitory, continuing for as little as 15m or 25m respectively before disappearing. More prominent were those connected to quarrying such as **D9**, **D19**, **D12**, **K342**, **G365**, **H535**, **K611**, **K615**, **K618**, and **N704**, which would have been used to carry away extracted stone. Tracks **D32**, **K382**, and **H562** showed evidence of revetment; others, like **G319** and **G356**, were obviously cut into the hillside (Plate 91). Tracks **D22**, **K385**, **K387**, **K391**, **K460**, **A269**, **H544**, and **N704** cut across outcrops, usually crossing at natural breaks in the limestone pavement (Plate 92). On the limestone pavement, cuts were sometimes made to create a track through the rock surface. These varied from 1.6m to 4m in width and were often cut 0.2–0.3m deep into the limestone pavement.
- 5.117 It was difficult to date the various tracks. Some clearly remained in agricultural use, such as on **I282**, **G319**, **K450**, and **J237**, showing obvious tractor ruts. In some cases, these were well-established and of a different width from that of a modern tractor, suggesting these may be cart tracks pre-dating the early 20th century. Examples of the successive use of the same or parallel routeways were found across the Scar, such as **I292**. In addition, tracks **I288** and **I287**, the two tracks at **J243**, and tracks **D7**, **D23**, and **D37** all used similar routes to each other with minor deviations, illustrating how such routeways changed over time.



*Plate 91: (left) track **G356** is obviously cut into the hillside. Plate 92: (right) track **B157** is clearly cut into the limestone pavement.*



*Plate 93: one of the series of hollow ways **B164** (looking south) and several of the other coalescing hollow ways can be seen to the east (left).*

Hollow ways

- 5.118 As their names suggest, hollow ways are ancient tracks which through use appear as a distinct linear depression in the landscape. These saw frequent use in a period when the principal form of transport for goods was by packhorse or cart and are typically medieval or early post-medieval (Historic England 2018c, 6). Some of the sunken tracks mentioned below are probably hollow ways and have been described as such; others are less certain. For example, the hollow ways **B130** and **A586** were part of a group of pathways leading north up the Scar. **B163** was probably associated with the group because it also headed generally north over the Scar; it comprised a series of deep (0.6m) hollow ways that zig-zagged and intersected (Plate 93), and were in part truncated by track **B164**. This perhaps illustrates the frequency of use, and how often the route changed, possibly as the result of erosion, which may have made one route impassable in poor weather.



*Plate 94: track **H537** running along the edge of surface quarry **H529**.*

- 5.119 Heavily laden stone carts descending from the quarries may account for a number of the sunken routes on the Scar. Quarry **H529** comprised a large section of limestone pavement in the corner of Zone H and was associated with two hollow ways, one of which (**H535**) cut through the limestone pavement and ran beside a possible stone dressing area (**H534**), the other (**H537**) ran alongside the limestone pavement (Plate 94).

This would have been the main route for transporting stone from the site. The same is true for quarry **H539** and another sunken route **H525**. Beside this were several intersecting tracks around a central rectangular platform **H524**, which was possibly used to prepare stone prior to transporting it off site. Tracks **H569**, **H570**, and **H572** may relate to this.

- 5.120 The origin of other sunken tracks is less clear. **H564**, **G314**, **A272**, and **A263** all appeared to pass under a wall suggesting they may pre-date the wall, or possibly that they were related to drainage. However, they were not visible continuing on the other side. In the case of **G314**, the land on the opposite side of the boundary appears to have been levelled as the result of heavy ploughing, and this may be true of the other examples.



Plate 95: (left) path C98 cuts through the limestone pavement. Plate 96: (right) stones placed on top of a grike at site J215 to prevent livestock falling in.

Paths

- 5.121 Most of the small paths encountered on the Scar during the survey were not recorded because it was difficult to differentiate some from sheep tracks. Only those that showed deliberate human construction were recorded, such as path **C98** which had been carved out to allow livestock to cross the pavement more easily. This was 1m wide, too narrow to be a trackway, and cut 0.95m deep into the limestone (Plate 95). Similar paths were observed elsewhere on the upland, and near path **C98** a stone slab (**C95**) had been

placed across a large grike to provide access. On a larger scale, several stones had been placed across a grike at **J215**, possibly for livestock to safely cross the escarpment (Plate 96).

Waymarker cairns and stones

- 5.122 To facilitate travelling across the Scar, especially in fog and poor weather, waymarker cairns – or walkers’ cairns – have been built near key tracks (**B112**, **D56**, **B151**, **J205**, **J206**, **J211**, **I298**, **I299**, **M421**, and **H519**) or in prominent positions to act as a reference point (Plate 80). Some of these are fairly recent, while others are of unknown origin, and appear on the First Edition OS map (1863). One such marker is ‘four stones’ (**M394** HER 62778) located 70m west of the boundary between Asby Winderswath and Crosby Ravensworth. This low cairn is only 0.3m high (Plate 97). Although it is tempting to associate it with the nearby parish boundary, ‘four stones’ stands separate from the numerous ‘piles of stones’ indicated along the boundary on the historic OS (Fig 5).

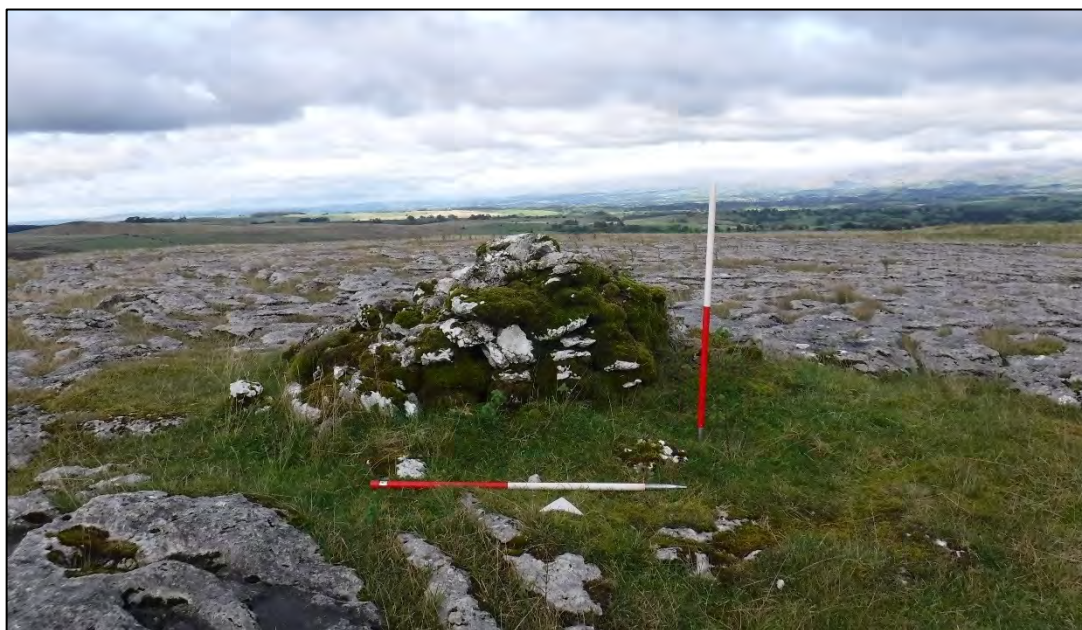


*Plate 97: the ‘four stones’ of **M394**.*

- 5.123 During the survey, 26 potential marker cairns were identified in various states of preservation. Some, such as **D18**, **J186**, **M395**, and **N710**, had been recently maintained and were located on promontories in clear view from the surrounding area (Plates 98 and 99). Other cairns were not easily visible and could not be directly associated with waymarking.



*Plate 98: cairn **M421** is on a prominent knoll and very visible from track **M423**. It is now reduced to a low mound to the west of an erratic.*



*Plate 99: cairn **J186** is on top of Cowman's Scar and very visible.*

- 5.124 As with cairns, individual boulders were also used to mark routeways. In addition to being a boundary marker, the thunderstone **D20** marks the way for track **D21**. Similar stones are located at **G333** (Plate 100) where two large stones flank a possible historic routeway.



*Plate 100: waymarker stones **G333** flanking both sides of a possible historic routeway.*

Stone settings

- 5.125 A number of narrow stones placed on end and set into grikes were identified across the Scar. Small ‘stone settings’ of this type have been found across Britain and Ireland, as well as other parts of the world, and are thought to date to the Neolithic and Bronze Age period. The monuments take a variety of geometric, semi-geometric and apparently random forms and are remarkable both for their small size, with most standing less than 0.2m high, and configuration (Gillings, Taylor & Pollard 2009; Mitcham 2019).
- 5.126 The stone settings of the Yorkshire and Westmorland Dales have a distinct regional character, dictated by the nature of the geology of the limestone plateau. Dr David Johnson, has recently conducted a study into the stone settings at Ingleborough as part of the Stories in Stone project. These, like the stones at Great Asby, were slabs of limestone set vertically into grikes (Johnson *et al.* 2020).
- 5.127 The Ingleborough study used a set of criteria to determine a man-made stone setting from a naturally occurring feature. The stone had to be securely set and immovable, it should be visible from more than a few metres away, and have a distinctive shape (*ibid.*). Although the Great Asby survey did not use this exact classification (the findings of the Ingleborough survey were published after the completion of the fieldwork), each individual stone was carefully assessed onsite and any classed as natural occurring were not recorded.
- 5.128 Johnson makes reference to the similarity between the Ingleborough and Great Asby

Scar stone settings, although at the time of writing only nine stones had been identified across the Scar. This figure has now increased considerable to a total of 65 individual or collection of stone settings.



*Plate 101: (left) stone **L483** stands very prominent in the corner of enclosure **L482**. Plate 102: (right) stone **J259**, although small, still appeared to be wedged into the grike.*



*Plate 103: stone setting **K662** had a distinctive shape.*

- 5.129 Of the these, **B137, B171, L483, K621, K624, K632** were quite large, standing up to 1.45m high (Plate 101); others (**J215, J259 L477, L488, H538, K623**) were considerably smaller, standing to a height of 0.3m (Plate 102). Many were covered in white lichen, whereas the rest of the pavement around them was not. This is a trend also noted by Johnson on Ingleborough (Johnson *et al.* 2020).
- 5.130 The largest and most impressive stone setting found during the survey was **K662** which stood 1.65m high, was 1m in length and 0.4m in width with several solution holes (holes in limestone caused by the natural dissolution of the limestone in water), some of which were large enough to stick a hand through (Plate 103).
- 5.131 Ninety percent of the stone settings recorded were set into grikes. Stones **C97, C100, B153, B167, B168, B180, J226, I309** all had small stones wedged behind them in order to keep them upright (Plate 104). Others (**G327, L485, and L487**) had been propped up against other stones on the grass near sections of limestone pavement. As such, it is unlikely these are naturally occurring formations.



*Plate 104: stone **B167** appears to be propped up by the stones within the grikes.*

- 5.132 Stone settings were found along the whole of escarpment **C90**, most of these were very visible in the landscape, especially **C88** at the end of the same escarpment. However,

the seven stones associated with **I289** and **I301** were not particularly visible. It is therefore difficult to say whether the settings were used as waymarkers. The fact that they were found in clusters may also suggest they were not primarily markers.

- 5.133 Some of the stones may mark a specific site. In the corner of settlement enclosure **L482** was a tall standing stone (1.45m high) (Plate 101) which could be seen from a distance and was the most prominent feature associated with the complex. Elsewhere, other stones were located close to recorded archaeological sites: stone **B150** was 8m from sheiling **B149**; **J187** was 8m from cairn **J186**. A large artillery shell was found beside the latter but is likely unrelated. Other stones, such as **J203** and **J208** may have marked the junction of tracks **B157**, **B164** and the historic Right of Way now no longer visible. However, these connections may be coincidental as there were many cairns, settlements, and tracks recorded that were not marked by such stones.



*Plate 105: stone E of area **I303**. The stone on the left has three visible drill marks on its side. It lies beside another stone setting (right).*

- 5.134 Site **I303** comprised nine stone settings (**I303A-I**) situated across a section of limestone pavement, adjacent to two small cairns. **I303E** featured three distinct shot holes on the side of the stone (Plate 105). In this case, therefore, the upright stone was probably a

section of quarried stone, propped up against others waiting for collection. Two nearby cairns, formed of slabs of stones stacked against each other, would confirm this idea.

- 5.135 Some of the stones surveyed were on their sides within grikes but did not seem inserted like those surveyed by Johnson *et al.* (2020). Stones **J203**, **J208**, and **K668** were all on their sides, but moveable within the grikes. These, and some of the other stones, may have been knocked into the larger grikes to prevent day-old lambs from slipping into them and getting trapped, which is a practice that used to be common on the fell (Cooper pers. comm.).
- 5.136 No discernible pattern in the distribution of the stone settings across the Scar was immediately apparent. However, a large proportion of the stones recorded are likely to be prehistoric in date, forming part of the broader ritual landscape and possibly marking temerging territorial divisions and boundaries (Gillings, Taylor & Pollard 2009). Further detailed analysis of the Great Asby settings was beyond the scope of the present Level 1 survey. However, the available data would certainly warrant further study in the future, particularly within the context of ongoing ‘minilithic’ studies being undertaken by Gillings, Taylor and Pollard (2009), Mitcham (2019) and Johnson 2020.

Miscellaneous

Find spots

- 5.137 Several flints were found in mud around a feeder at the base of Little Kinmond (**B128**). These were not collected at the time because they were in an area significantly trampled by livestock and were therefore unprovenanced.

Springs

- 5.138 Several springs were found at the base of limestone escarpment in Zones B, C, and D. Springs form naturally, but these showed evidence of associated human activity. For example, the spring at **D25** was on two levels, connected by a narrow path, the upper level having possibly been revetted in stone. At spring **C64**, cobbles had been placed in the drainage gully to prevent erosion; at spring **D46**, an old, deeply weathered stone drinking trough, 0.5m by 1.2m and 0.35m deep, was located within a small gully (Plate 106). It was still full, but did not appear to be in constant use. At spring **B107** a modern pipe had been inserted to channel the spring along a drainage gully.

Salt licks

- 5.139 A small (0.4m by 0.4m), ceramic, salt lick trough (C79) was found in an area used by livestock (Plate 107). The trough was quite eroded, and appeared to no longer be in use as it was full of water. Due to its small size, it was mostly likely used to hold salt rather than feed.



Plate 106: spring D46 and its stone trough (looking south). Plate 107: salt lick C79 (looking south).

OS markers

- 5.140 A concrete OS triangulation pillar D61 was located at the top of the Knott (Plate 108). The column was 1.3m tall with a square base with sides of 0.9m. It was situated in an area of good visibility both to the north and south. A plaque at the base indicated that this was point no. 10674. The column was in good condition. Designed by Brigadier Martin Hotine in 1935, these pillars formed part of a new country-wide control network intended to unify what had previously been local county projections onto a single national datum, projection and reference system, what is today the OSGB36 datum and National Grid (BBC 2016).
- 5.141 A benchmark was found located at the base of stile G326 along the historic Right of Way. The benchmark was inscribed on a square, cleanly cut stone at the base of the wall, 1m north of the first step of the stile (Plate 109).

- 5.142 With the introduction of Global Positioning Systems (GPS) both the 'trig pillars' and benchmark have become redundant and now form part of the archaeological record.



*Plate 108: (left) trigonometric column **D61** (looking south-east). Plate 109: (right) benchmark located at the foot of stile **G326**.*

6.0 CONDITIONS ASSESSMENT

Site condition

- 6.1 A condition assessment was performed on all sites surveyed. Individual recommendations for each site are listed on the gazetteer (Appendix C). General issues and recommendations are discussed below.

Collapse and neglect

Gates

- 6.2 Some of the gates are in relatively poor condition. Both gates **G313** and **L445** have a section of adjoining wall collapsing. In the case of **C68**, the wall has collapsed and is leaning on the wooden gate post. Similarly, gates **D39** and **B162** have heavily leaning stone stoups and walls. At **H446**, the gate stoups have been removed and the gap filled with old tyres. Other gates are at high risk of collapse, including **D51** and **H502**, which are both overgrown and neglected. These gates would benefit from stabilisation works.

Sheepfolds and hogg holes

- 6.3 Some sheepfolds and hogg holes are extant but in poor condition. Sheepfold **B166** shows clear signs of neglect evidenced by the collapsing wall at the entrance. Worse still is sheepfold **C76** where two walls have been rendered with cement near the top, causing large holes to appear within the structure. Hogg holes **D30**, **D45**, **D49**, **B120** have all partially collapsed. These features are evidence of farming activity on the fell and would benefit from consolidation.

Vehicle damage

- 6.4 Vehicles have been driving on or very near important monuments on the Scar. Tractor tracks on sow kiln **K370** show there is an imminent threat to the site's structure. Similarly, at hut circle **L439** a modern quad-bike track cuts through part of the site, and hollow way **K373** has been truncated by two quad-bike tracks. Every effort should be made to divert tractor and quad-bike routes away from archaeological sites. The preparation of this report may be an important step towards archiving this by informing tenants of the archaeology on their land.

7.0 RECOMMENDATIONS FOR FURTHER WORK

- 7.1 Many of the more significant sites on the Scar would benefit from further archaeological research, including sheilings, prehistoric settlements, the stone settings and mining sites. The project was a Level 1 Survey (Historic England 2017), which is a basic level intended to inform an understanding of the archaeological resource, rather than the detailed measurement and analysis of sites; however, it has helped to identify sites warranting Level 2 and 3 assessment.
- 7.2 Sheiling sites **B142**, **B149**, **B175**, **B176**, **J207**, **L482**, and **N677** would benefit from a Level 3 earthwork survey, which may help clarify their use and period.
- 7.3 Settlements **H306** and **H517** are both likely prehistoric in date and as such would benefit from Level 3 survey and possibly targeted excavation for sampling. The same is true of site **B158**, the possible longhouse, because its function and use remain a mystery. Earthwork survey and targeted excavation of this site would perhaps clarify some of the many questions it raises and would make a suitable and worthwhile community project, which LAS may investigate in the future.

- 7.4 Mine **K643** is another site that would benefit from a Level 3 survey to record the bell pits, drainage channels and adits, coupled with further documentary research. At **K606**, although the related earthworks were much less extensive, further survey of the mine is recommended. The adit was also identified as being at risk and may require structural consolidation in the near future.
- 7.5 Finally, the data on the setting stones would certainly warrant further research similar to that conducted on Ingleborough. Further investigation into these features and their distribution across the Scar and surrounding area may help elucidate practices and geographic relationships as yet unknown.

Interpretation

- 7.6 With the plethora of sites found on the Scar there is much that visitors to the area can learn. Consideration should be given to improving interpretation of this historic common, this might include a downloadable walking route for some of the key sites, and inclusion of the archaeological resource on the YDNPA's 'Out of Oblivion' website (www.outofoblivion.org.uk/).
- 7.7 Further methods of interpretation and communication could be explored given appropriate resources. This might include an interactive map with details of a number of sites. Another option is a downloadable podcast to present results of all three seasons (and any future work). The volunteers who took part could be approached to share their stories of the moorland survey and what they learnt from it.

8.0 CONCLUSION

- 8.1 Over three seasons (six weeks in total) of surveying, 699 archaeological sites were identified most of which were new and had not previously been recorded. This clearly demonstrates both the value of intensive walkover surveys such as this, and the richness of the archaeological resource on Great Asby Scar and provides a good starting point for deciphering the development of the area over time.
- 8.2 Twelve of the 21 survey zones identified in the previous project design (NAA 2017) were surveyed. The remaining areas have either been, or are in the process of being, surveyed by Lunesdale Archaeology Society. This work will significantly contribute to our understanding of human activity on the Scar.

- 8.3 The earliest activity recorded dates to the Late Neolithic/Bronze Age period with sites identified that potentially relate to both settlement and agriculture. The stone settings may also date to this period, although further research needs to be conducted. Settlement appears to have continued across the Scar, at least on a temporary basis, through from the Bronze Age to the medieval period. During this time fields were cleared, pens were built, and boundaries constructed to manage livestock and cultivate the thin soil of the upland. It is not certain how much land was actually cultivated, but the clearance cairns found across the area suggest that crops were being grown on the fringes of the uplands. The type of crop grown would have varied over time in accordance with changes in the climate and in population numbers, the latter placing increased demand on agricultural resources.
- 8.4 The process of enclosure during the post-medieval period significantly changed the landscape, culminating in parliamentary enclosure in the 19th century which saw the last of the common land on the Scar divided into a series of geometric land partitions, with only a few fields of common land remaining in the north-west corner. The enclosure process saw the introduction of new boundary walls, quarries, drains, gates, stiles, sheepfolds, smoots and hogg holes, all related to constructing or crossing new land boundaries in the form of drystone walls.
- 8.5 With the wide variety of archaeological sites on the Scar, what becomes most apparent is the dynamic relationship between the landscape and human activity for centuries, which has culminated in the landscape we see today. A Bronze Age burial mound or hut circle does not remain perched on the Scar unaffected by subsequent activities. They too, like medieval quarries, became sources of stone for later enclosure walls. Likewise, prehistoric settlements at the Knott and Great Kinmond, were utilised later as sheilings, and changed in the process, along with the hut circles and burial mounds, to conform to new needs and methods of land management.
- 8.6 The results of this survey have provided a better idea of the development of settlement and use of the Scar but have also raised many questions. Further investigation is required as to the sequence and use of many of the small walls, enclosures, and settlements that dot the area; key sites that would benefit from further earthwork survey or excavation have been identified. The results of such research have the potential to facilitate a greater understanding of the date and function of these sites.

- 8.7 Finally, but no less importantly, the project has successfully trained a group of volunteers who are now able to undertake level 1 survey with minimal guidance. A total of 33 volunteers took part across the three seasons, many attending a number of days. The in-depth local knowledge brought by the volunteers, many of whom have spent a lifetime walking and working on the uplands, coupled with a rigorous recording methodology introduced by the NAA archaeologists, illustrated the importance of community surveys like this to the advancement of landscape studies. It is hoped that the Great Asby Scar volunteers, now provided with appropriate recording skills, will be keen to undertake further survey not only across the Scar but throughout the Yorkshire Dales National Park, and continue to make an important contribution to the expansion of the YDNPA HER.

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Maps

1863 First Edition 25-inch OS map Westmorland XXII.10, XXII.9, XXII.6, XXII.5

1898 Second Edition 25-inch OS map Westmorland XXII.10, XXII.9, XXII.6, XXII.5

1915–20 Third Edition 25-inch OS map Westmorland XXII.10, XXII.9, XXII.6, XXII.5

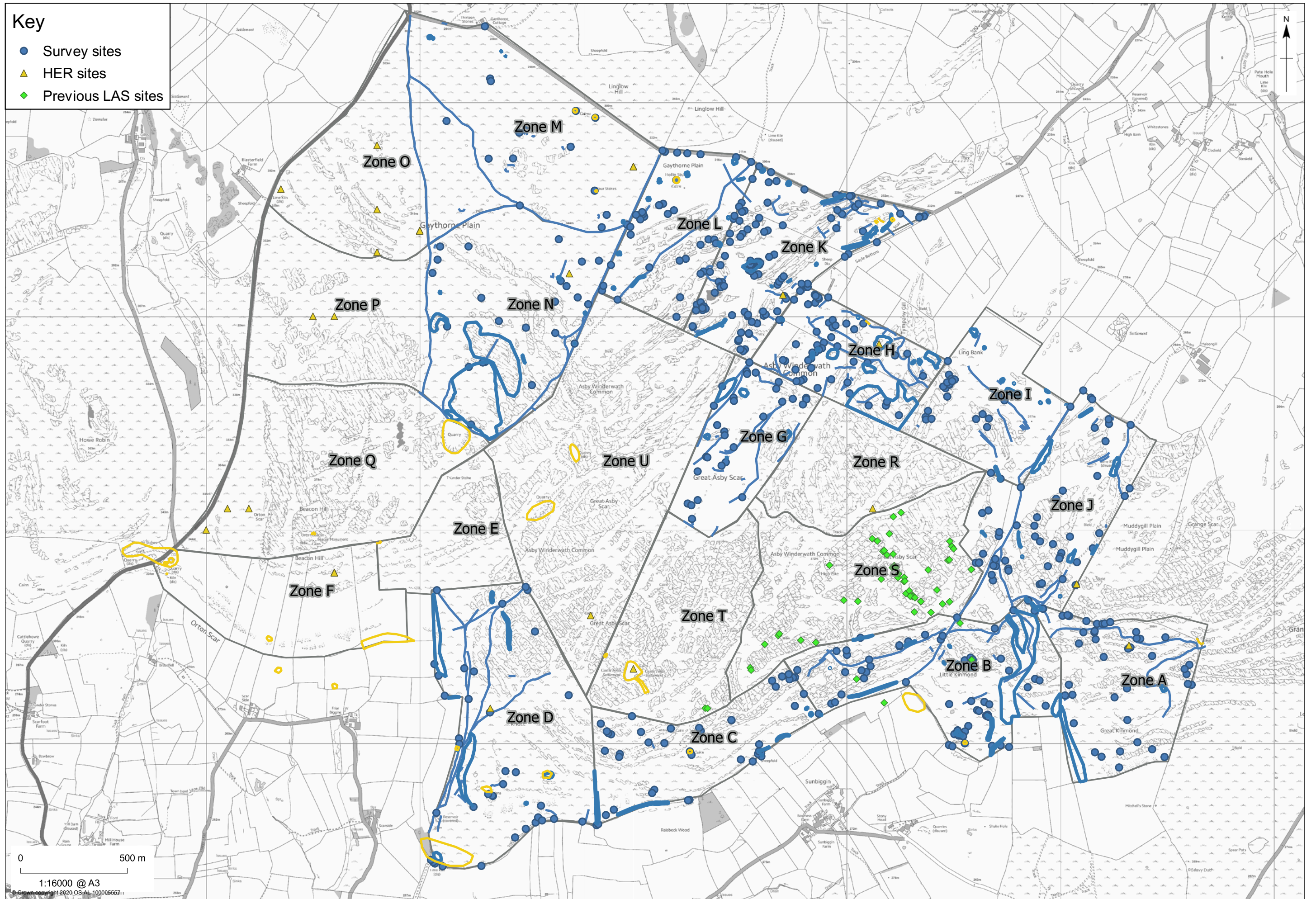


Figure 34