GELTSDALE MIDDLE TOP, CUMBRIA, NORTH PENNINES AONB

~ ARCHAEOLOGICAL INVESTIGATION OF A PEATLAND LANDSCAPE ~

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The Archaeological Practice Ltd.

GELTSDALE MIDDLE TOP, CUMBRIA, NORTH PENNINES AONB

REPORT ON AN ARCHAEOLOGICAL INVESTIGATION OF A PEATLAND LANDSCAPE

***Frontispiece**: Survey work, archaeologists investigate a typical 'hag' on the Geltsdale Estate, in early March 2023.*

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Client:	*North Pennines AONB Partnership*

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SUMMARY

An archaeological survey of linear erosional features identified in the NPAONB peatlands survey for the Geltsdale Middle Top study area recorded 410 sample/intermittent points, of which 273 (66.6%) were identified as having no visible peat/mineral interface) PMI, with 137 (33.4%) identified as having a visible PMI where associated finds of artifacts might be expected.

No features or finds of archaeological significance were observed within any of the sample areas, however; specifically, no remains of any kind indicative of prehistoric occupation or activity prior to the formation of the existing peat deposits. Based on these findings and taking note of the altitude range within which the survey took place, it is suggested that the Geltsdale study area is unlikely to have been occupied or exploited intensively by prehistoric groups for any significant length of time, being unsuitable for prolonged human occupation during prehistory and in later periods. The likelihood that any retrievable remains were deposited in prehistory during any brief hunting or foraging visits made to the area is reduced by a factor of the limited amount of person time spent there, while the chances of retrieving such data over the very great areas involved in the current survey are remote indeed.

With respect to the current Geltsdale site, no features or finds were made during the survey which warrant recommendations for further analysis or conservation. Thus, it is not considered necessary, on the basis of the archaeological survey, to carry out any further recording or evaluation works prior to the implementation of the peatland restoration techniques as proposed by the NPAONB.

With respect to the planned restoration works, although this moorland site seems likely to have been sparsely exploited through recorded history or prehistoric times, any archaeological features or finds appearing should be recorded and, if possible, retained by the groundworkers. To this end, consideration should be put to supplying the groundworks team with basic information on likely features and finds that may occur and should be retained.

The absence of finds made during this investigation does not invalidate the value of carrying out future investigations of this kind, particularly at lower altitudes where the potential for human settlement and land-use is higher.

Should any finds be made during similar future investigations, recommendations should be provided on the basis of the perceived significance of features or finds collected or likely to be impacted and, with regard to features such as occupation sites and flint scatters, the level of risk in terms of their likely disturbance and ease of avoidance. In order to evaluate the risk to archaeological remains associated with peatland restoration techniques, a scoring system should be invoked, leading to defined mitigation strategies. In most cases where archaeological material is encountered, mitigation by avoidance is likely to be the preferred option.

Although issues such as nesting, lambing and grouse-shooting seasons may conspire to force such work into the later Summer, Autumn or Winter, such work should, by preference, be carried out in the Spring when vegetation remains low but daylight hours are extended, allowing longer fieldwork periods, and when both weather and conditions are more amenable to effective survey and recording methods.

1. INTRODUCTION

1.1 Location, Extent and Context of the site

The investigation site on Geltsdale Middle Top lies within the North Pennines Area of Outstanding Natural Beauty (AONB), it is designated as a SSSI (Geltsdale & Glendue Fells SSSI), North Pennine Moors (SAC & SPA). The site lies in the northwest of the North Pennines AONB, 10 km NW of the town of Alston, Cumbria and 10 km SE of the town of Brampton, Cumbria. Due to the nature of the area as a peatland, access to the site was difficult due to tall heather, areas of wet bare peat and general weather conditions, particularly challenging over winter months. The site could only be accessed by approximately 40 minutes' walk from the nearest parking area. Access to the site and parking had to be confirmed by NPAP staff before visiting.

1.2 Background to Investigation

This document reports on archaeological investigation work at a peatlands site which took place as a trial investigation for the North Pennines AONB. The results of the investigation will be used to inform peatland restoration scheduled for autumn/winter 2023. Comparable work is also envisaged at several other upland sites (some of which have much larger eroded areas potentially available for survey) in future years, the detailed methodology for which will be developed using insights derived from the results of the Geltsdale survey.

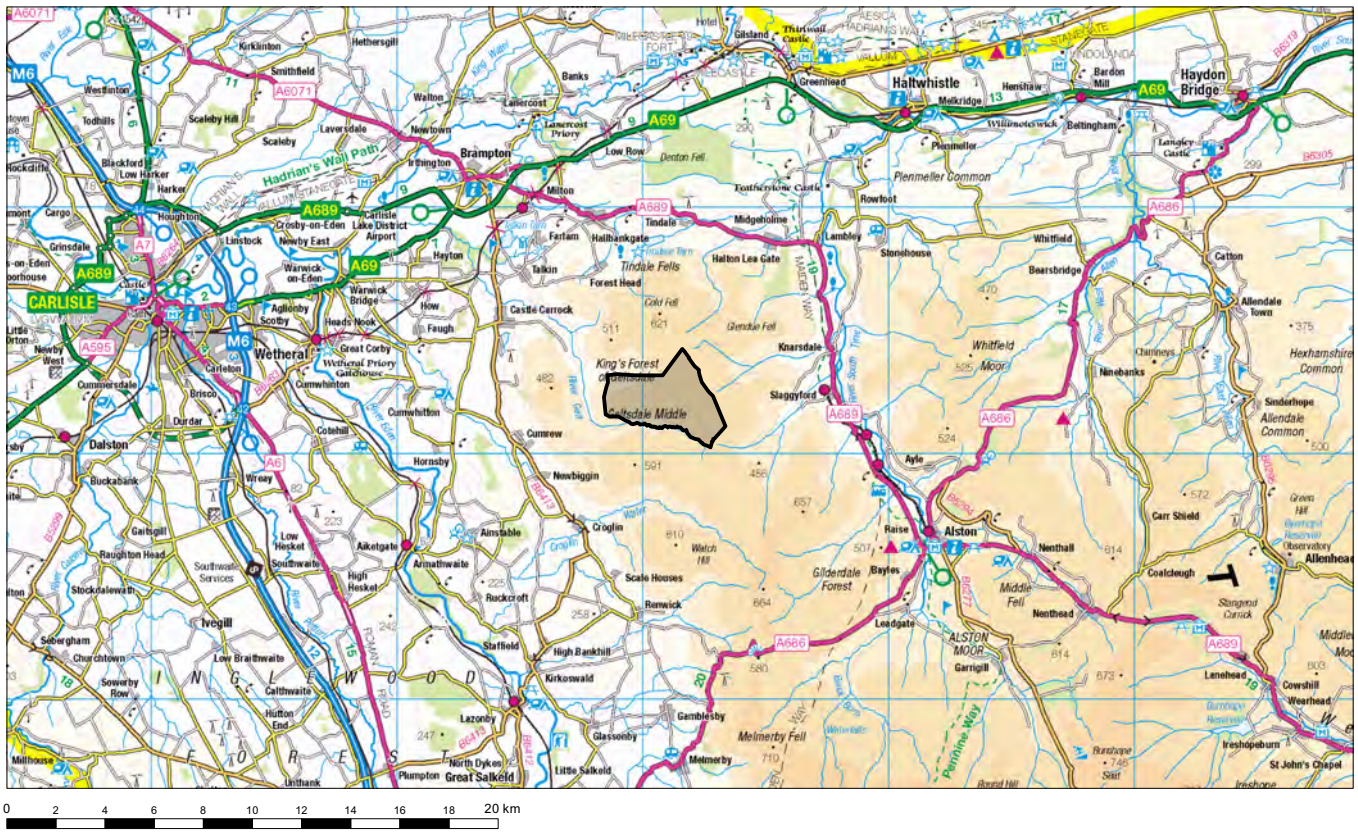
Work elsewhere in the North Pennines (most notably at Cow Green in Upper Teesdale where recent excavations by the Altogether Archaeology group recovered hundreds of lithics from a 10,000-year-old Mesolithic settlement: see report at www.altogetherarchaeology.org) demonstrates that remnants of prehistoric activity can be preserved at the base of peat deposits, even at high altitudes. Such remains, often in the form of worked flint scatters, are generally found at the interface between the base of the peat and the underlying mineral sub-soil or bedrock, and represent sites that were in use prior to the onset of peat formation.

The North Pennines AONB Partnership (NPAP) Peatland Programme is undertaking restoration of upland peat landscapes throughout the North Pennines, within several of which natural erosion has exposed the **peat/mineral interface (PMI**), or junction between the natural sub-soil or bedrock with the base of the peat. When restoration work is complete, the peat/mineral interface will no longer be visible, so any archaeological remains currently exposed here will effectively be lost forever. Consequently, this work was intended to examine the base of the peat where it is currently exposed, and recover any archaeological artefacts or ecological samples of potential interest.

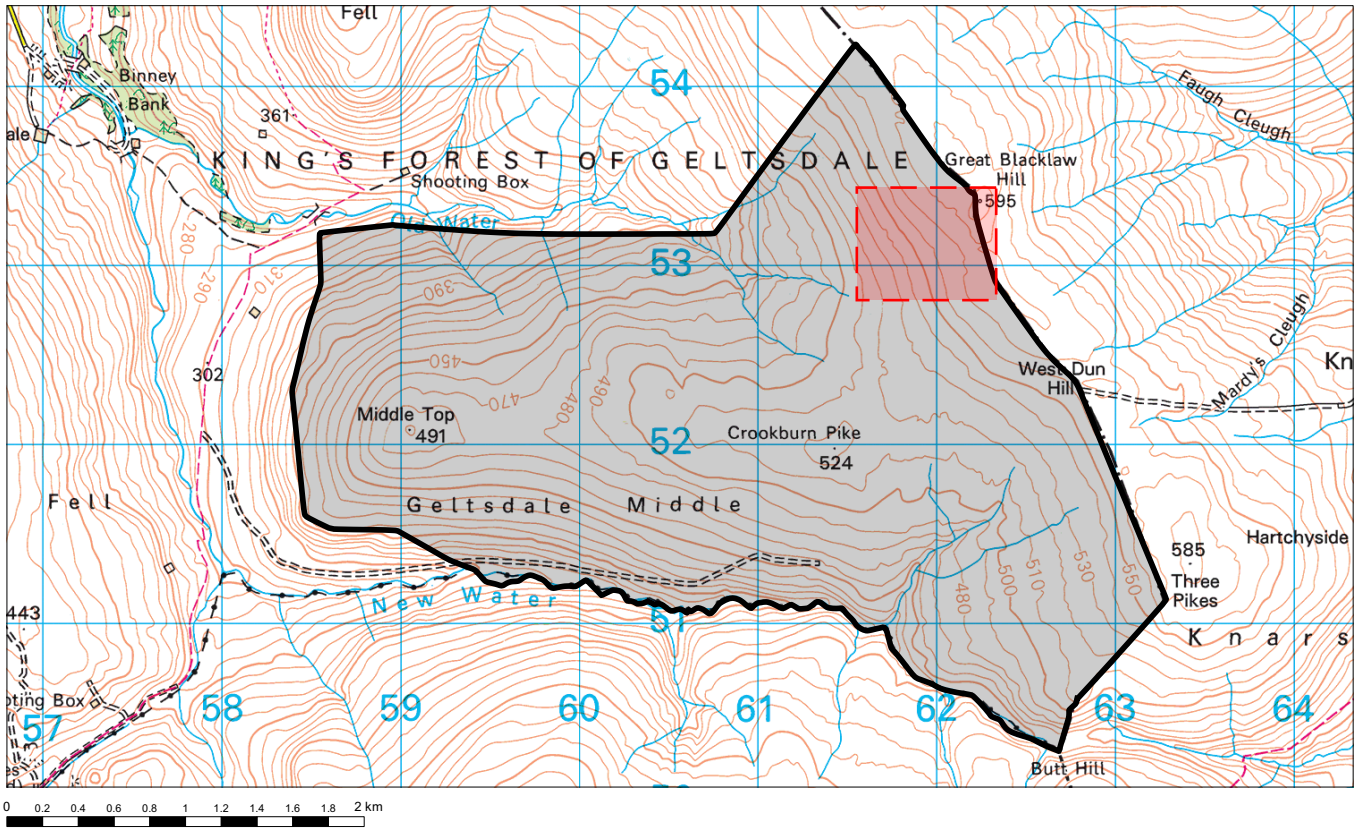
The areas marked for conservation work have been surveyed in detail by the AONB peatland project, and places where the underlying mineral is exposed have been mapped (*see Illus. 03*). This preliminary survey provided a basis on which the archaeological survey could be planned. Aerial photography (Illus. 07) and LiDAR imagery (Illus. 06) of the area were also utilised to help identify potential features of archaeological interest.

1.3 Objectives of the Investigation

The objectives of the work were to examine areas where the overlying peat has been eroded to a mineral base in order to gauge the presence/absence of archaeological remains and, if present, their relative abundance and archaeological importance. The areas chosen for investigation

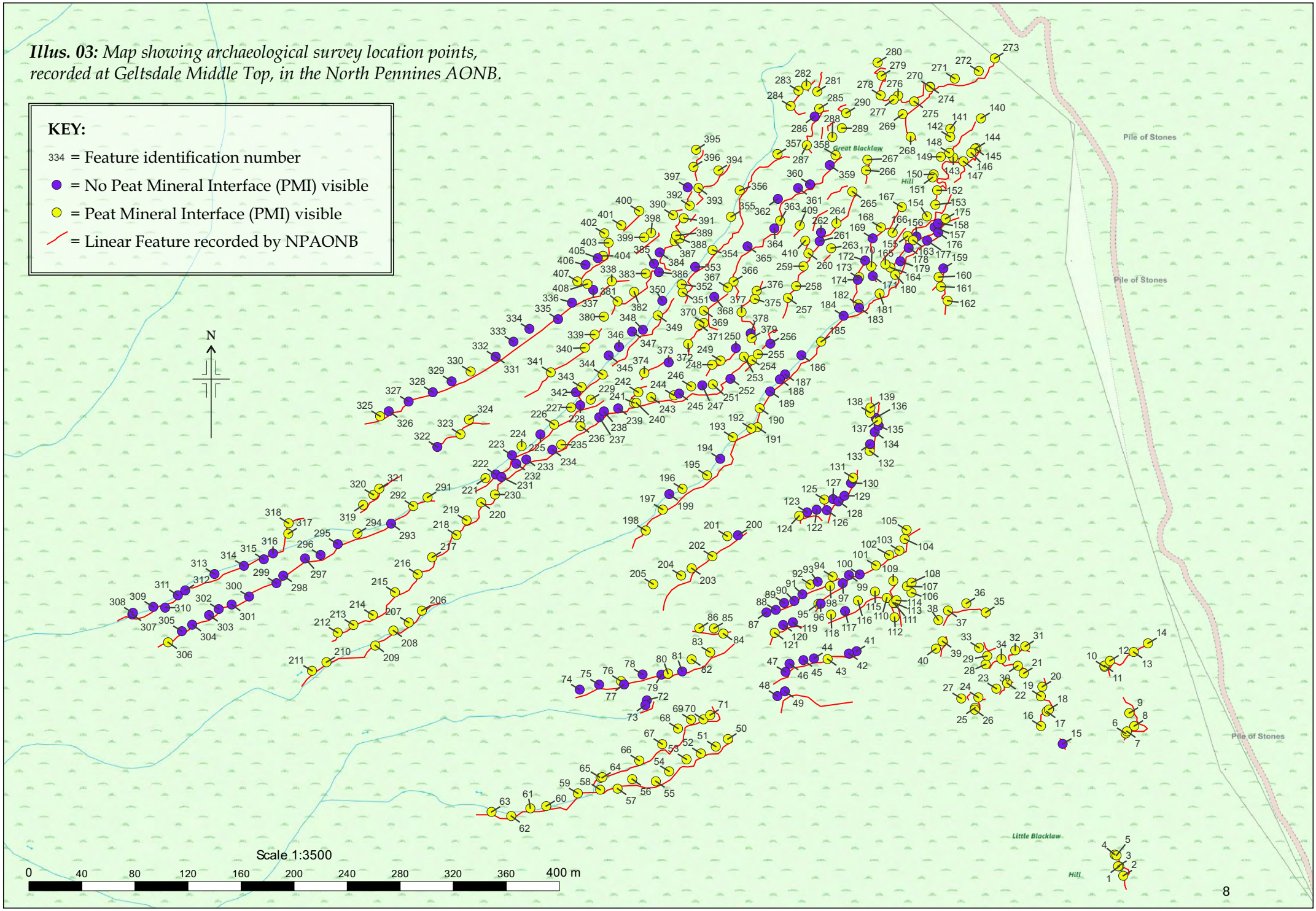


Illus. 01: *Regional view, showing the location of Geltsdale Middle Top (highlighted in black) west of the South Tyne, in the North Pennines AONB.*



Illus. 02: *Map of Geltsdale Middle Top, showing the estate boundary (highlighted in black), and showing the approximate area of survey (highlighted in red) in the north-east part of the estate.*

Illus. 03: *Map showing archaeological survey location points, recorded at Geltsdale Middle Top, in the North Pennines AONB.*



(highlighted as linear features on Illus. 03), have previously been surveyed in detail by the AONB peatland project, which has mapped places where the underlying peat/mineral interface is exposed, providing a basis for planning the archaeological surveys.

As stated in the Project Brief (Appendix 1) the requirements of the project were as follows:

- A walkover survey of c. 5.5 km of erosional features identifying the presence of lithics or any other archaeological artefacts from the designated study area. All such finds should be recovered for analysis. Any ecological samples such as branches or twigs, noted at the interface between mineral and peat and considered potentially-significant, should also be sampled for analysis.
- Collection of precise geo-locations and labelling of all finds using handheld GPS units.
- Basic finds assessment to determine their character, age and level of significance will be carried out, providing recommendations for any further finds analysis considered necessary or desirable.
- Production of an illustrated, written report summarising all work and any finds, including photographs (with scales) of the mineral/peat interface at each of the designated locations (regardless of whether any finds are made).

1.4 Methodology

The following methodology was applied to the survey fieldwork:

- Each erosion feature was followed down-slope, beginning in the East (for specifics, see below).
- Following the erosion feature, the peat-mineral interface was inspected for any potential artefacts or ecofacts to be collected for later analysis.
- Each sample found was recorded via ArcGIS Survey123 to retrieve a precise geolocation of the sample point, photographs of the location, a unique sample ID and a brief overview of each sample.
- Where no samples were found, intermittent points (c. every 10 m) were collected as the survey was carried out to evidence the lack of finds and to ensure each area was sufficiently assessed.
- For each area assessed one of the following three assessments was made:
  - No additional investigation required;
  - Some potential further investigation may be required;
  - Highly sensitive area, no restoration work to occur within the vicinity before additional investigation has taken place

2. CULTURAL HERITAGE BACKGROUND

2.1 General site summary

Like much of the rugged terrain in the North Pennines, the current study area, in the north-eastern part of Geltsdale Middle Top (*see Illus. 01-02*) comprises largely of peatland moor situated on high open ground between approximately 520-595 metres AOD. There is no recorded historical evidence for settlement in the study area, nor does historic mapping (Illus. 04-05), aerial photography (Illus. 07) or LiDAR analysis (Illus. 06) indicate any noteworthy archaeological features. This situation is entirely in-keeping with the high elevation of the site, its remoteness, inaccessibility and harsh, windswept, boggy terrain, which has made it impractical and uneconomical for both settlement and agricultural improvement. The site is managed for low intensity cattle grazing and is part of a larger area managed by the RSPB for the protection of upland birds especially Curlew, Golden Plover, Merlin, Short Eared Owl and Hen Harrier. Its peat bogs are considered a useful carbon store worthy of conservation, which has recently been identified as being under threat from erosion.

2.2 Broader HER summary

Elsewhere on the Geltsdale Estate, notably in the north-western part, situated approximately 2.6 km west of the current study area, the Cumbria Historic Environment Record has identified two sites of cultural heritage value (see table in 2.2.3 below and Illus. 08) situated just south of the '*Old Water*' stream. These comprise of a Shieling (HER 3859), most likely associated with shepherding across the western fringes of the Geltsdale Estate during the Medieval period; and the adjacent Middle Top Coal Mine (HER 40716), which pre-dates the 1st Ed OS 1861.

Additionally, a Cairn of unknown date is noted (HER 589), located in the southern part of the Geltsdale Estate, and there are several other Carins in the immediate area to the south of the estate. Cairns such as this often demark human burials dating to the Bronze Age, but many are simply reference markers or memorials in the landscape and can be much more recent.

2.3 Previous Archaeological Assessment and Investigation

2.3.1 There has been no previous archaeological assessment or investigation in the current study area or elsewhere on Geltsdale Middle Top.

2.3.2 In 2015, an archaeological study was undertaken at a comparable upland site in the North Pennines, at Cow Green, situated just north of the river Tees on the east bank of Cow Green Reservoir. Large quantities of Mesolithic flint and chert material were found here eroding from an old land surface, sealed beneath peat. The site was identified as a hunter-gatherer camp of Mesolithic origin (over 10,000 years old), where highly mobile groups lived in lightly built shelters and followed the seasonal movements of game animals.

2.3.3 The author of the Cow Green report, Rob Yong, commented that these communities may have utilised a well-structured and ordered system of base camps and, usually, upland extraction camps - as suggested for the site at Cow Green. The latter are seen as activity areas located at specific points within the landscape to utilise and exploit targeted subsistence resources. In this instance, the site at Cow Green was clearly located at the head of an old spring line system on a low terrace above the River Tees, its position suggesting it may have been located on a route-way or corridor of connection between the lowlands of Teesdale (and potentially North Yorkshire), through the North Pennines and into Cumbria.

2.3.4 The findings at Cow Green clearly demonstrate that remnants of prehistoric settlement can be preserved at the base of peat deposits, even at altitudes previously assumed as too high for settlement. However, whilst very much still an upland landscape, the

Cow Green site was recorded at a height of 490 metres AOD, which is between 35-105 metres lower than the present study area on Geltsdale Middle Top. This difference in altitude and the lower resource potential at Geltsdale suggest that the potential for archaeological remains should also be lower at Geltsdale.

2.4 Scheduled Ancient Monuments

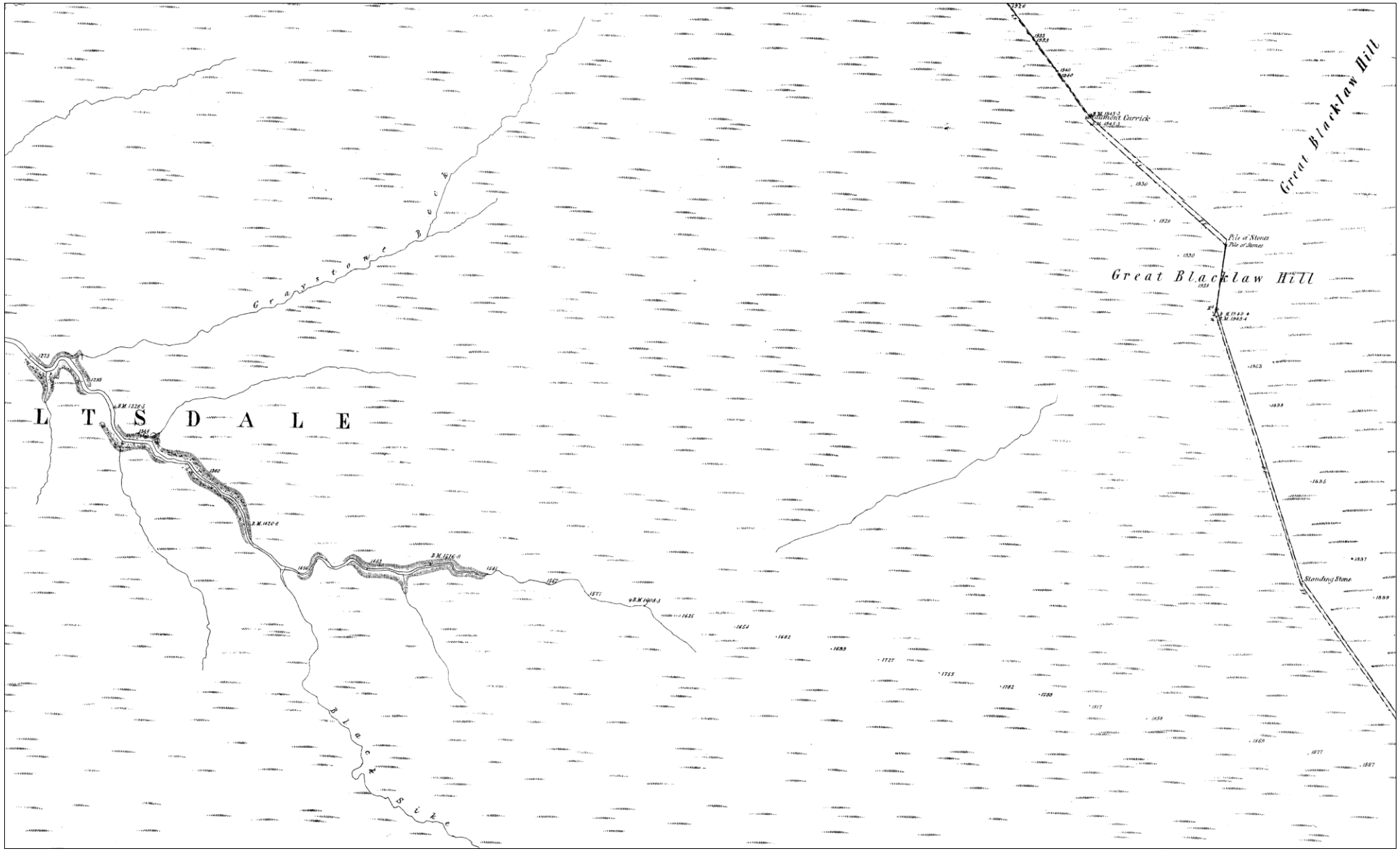
The Scheduling of a site by the Secretary of State denotes it is of at least national significance and provides statutory protection over the defined area of the monument. There are no Scheduled Monuments within the current study area or elsewhere on Geltsdale Middle Top.

2.5 Sites Appearing in the Cumbria Historic Environment Record (HER)

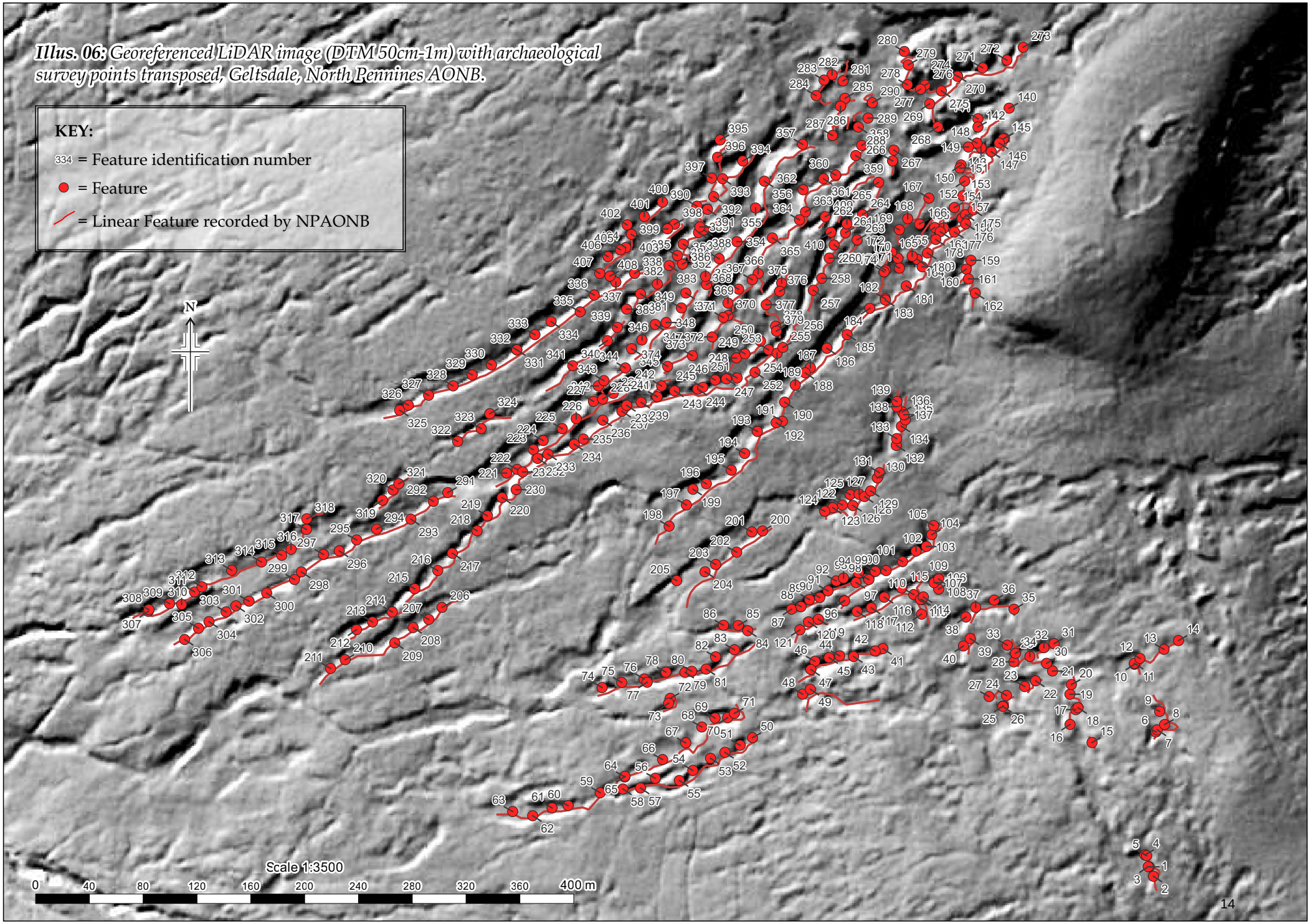
Cumbria HER has been accessed for entries within and in close proximity to the assessment area which may be impacted upon by proposed development. Consideration of sites outside the defined zone enables better evaluation of its archaeological and historical context, highlighting the nature of potential remains within the assessment area. This has resulted in no entries within the actual study area, but 3 entries within the broader Geltsdale Estate, as follows:

HER No.	SITENAME	SITETYPE	GENPERIOD	SPECPERIOD	EAST	NORTH
589	Geltsdale Middle Cairn	Cairn	Unknown	Unknown	360300	551600
3859	Geltsdale Shieling	Shieling	Medieval	Unknown	358750	553150
40716	Middle Top Coal Mine, Geltsdale	Mine	Post Medieval	Unknown	358950	553120

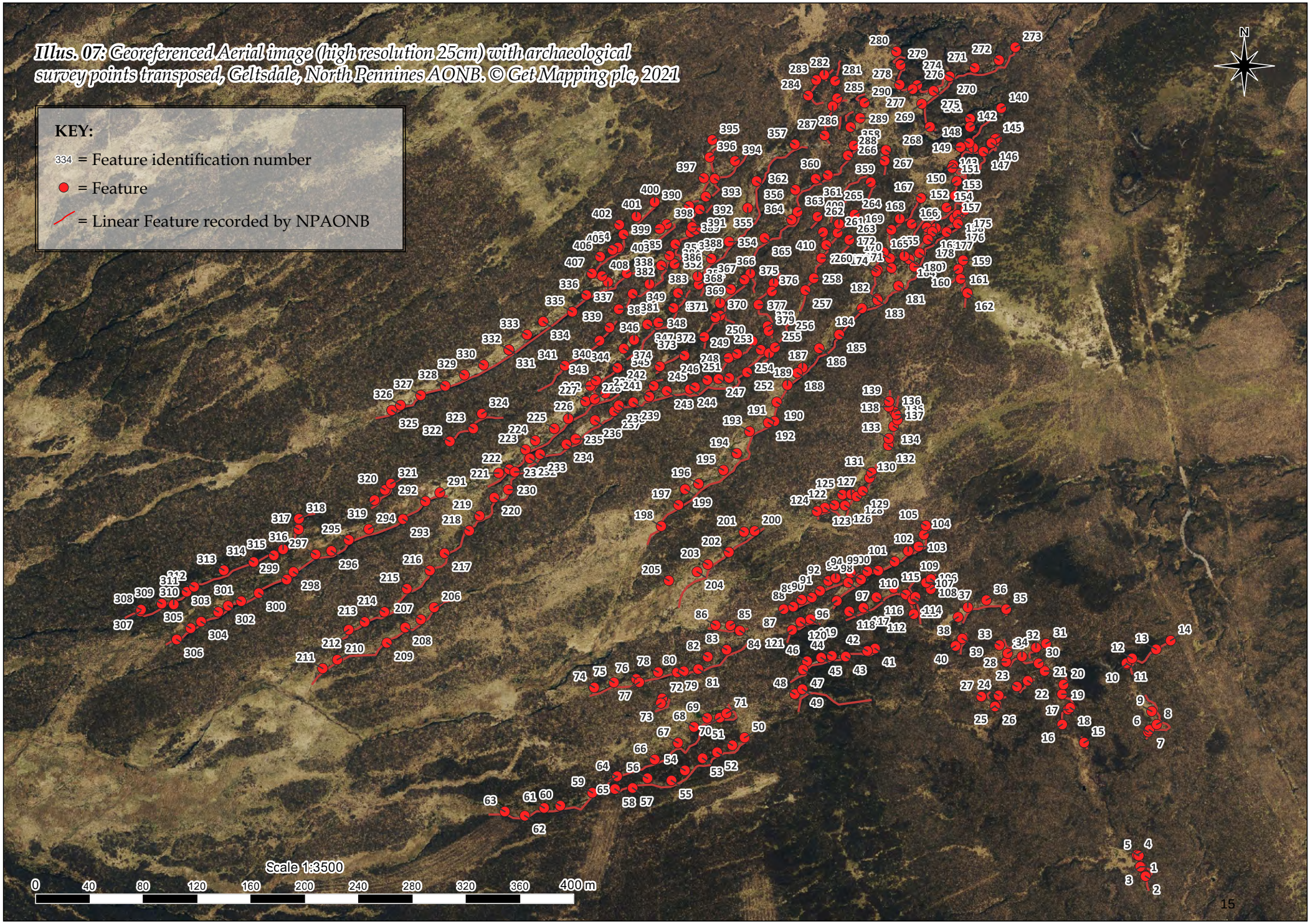
Illus. 04: *Extract of the 1st edition Ordnance Survey Plan of Cumberland, 25-inch series, surveyed 1863, showing the east side of Geltsdale.*



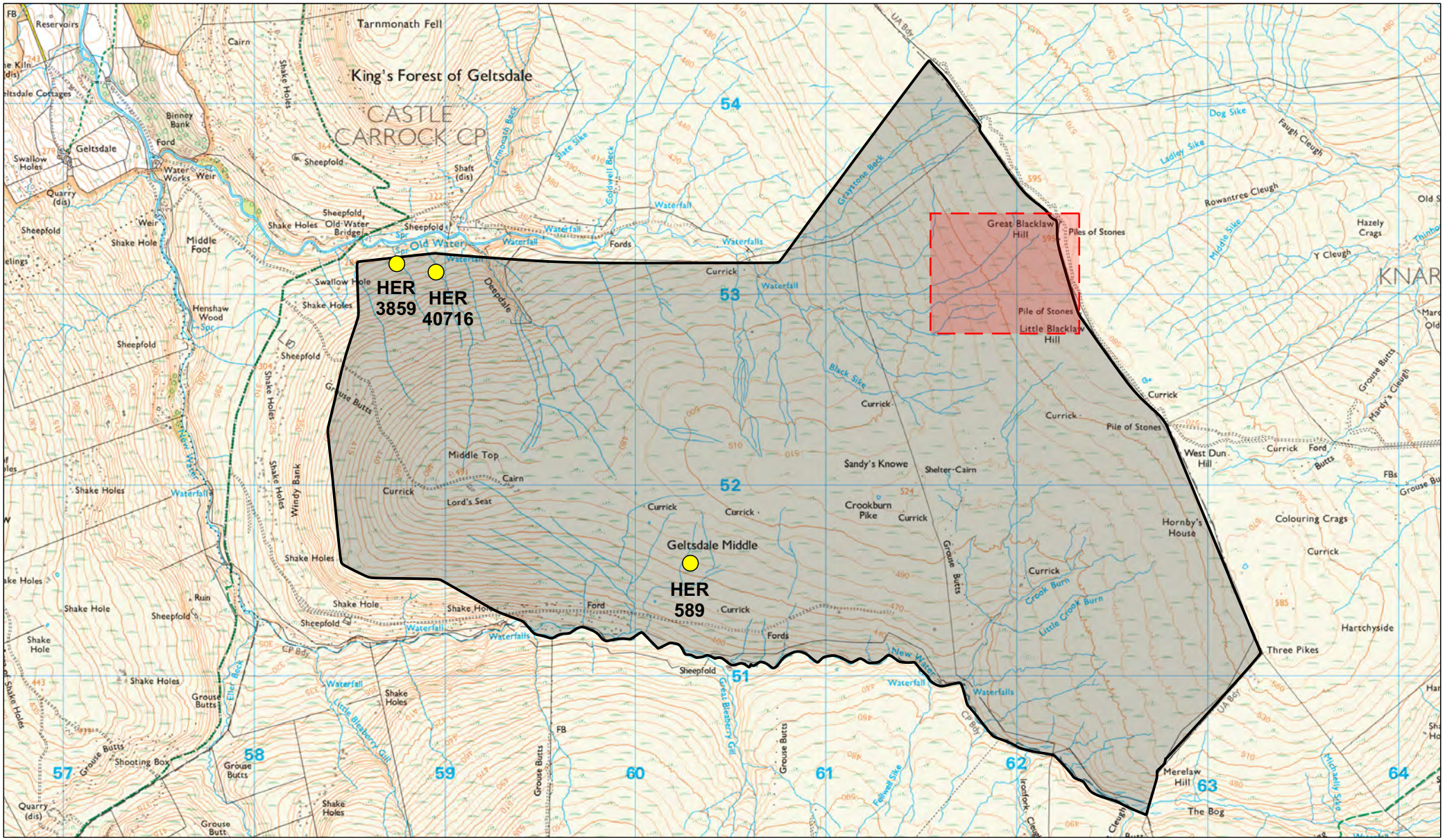
Illus. 05: *Extract of the 2nd edition Ordnance Survey Plan of Cumberland, 25-inch series, published 1895, showing the east side of Geltsdale.*



Illus. 06: *Georeferenced LiDAR image (DTM 50cm-1m) with archaeological survey points transposed, Geltsdale, North Pennines AONB.*



Illus. 07: Georeferenced Aerial image (high resolution 25cm) with archaeological survey points transposed, Geltsdale, North Pennines AONB. © Get Mapping plc, 2021



Scale 1:27500

0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 km

Illus. 08: *Map showing known archaeological sites recorded in the Cumbria HER within Geltsdale Middle Top (black boundary). The current survey area is highlighted in red.*

3. SOURCES FOR ARCHAEOLOGICAL ASSESSMENT

3.1 Archival Material and Secondary Sources

The following sources of documentary, cartographic and photographic evidence were consulted:

- ***Cumbria Archive Centre (Carlisle)***
- ***Cumbria Historic Environment Record (HER)***
- ***National Monument Record, Historic England, Swindon (NMR)***

3.2 Types of Information

Included amongst the various kinds of information used from each of the above sources are the following:

3.2.1 HER, Scheduled Monument and Listed Building Records (see *Illus. 08*)

There are no HER entries within the actual study area, but 3 entries within the broader Geltsdale Estate (see 2.2.3 above). There are no Scheduled Monuments or Listed Buildings within the current study area or elsewhere on the Geltsdale Estate.

3.2.2 Primary documentary sources

The majority of sources were consulted through published synthesis, but a number of original documents were also examined, in particular early maps and aerial photographs.

3.2.3 Secondary and Published Information

Local and Regional Histories

Published works and unpublished reports which shed general contextual light upon the assessment area or upon particular aspects of its archaeology or history are included in the bibliography and cited in the text where relevant.

3.2.4 Historic Map Evidence

The following historic maps covering the area have been found useful in compiling a catalogue of monuments and history of the assessment area, amongst which the historic Ordnance Survey series has proven most useful (see *Illus. 04-5*):

1st Edition Ordnance Survey Plan of Cumberland c.1863, 1:2500 series.

2nd Edition Ordnance Survey Plan of Cumberland c.1895, 1:2500 series.

3.2.5 Aerial Photographs

Only modern Google Earth aerial photographs were used in the current assessment (see *Illus. 07*), although historic coverage from c WW2 onwards is available for the area at the Historic England National Monument Record (Swindon) and possibly in the Cumbria Archives (Carlisle), which may show some of the linear features identified in the NPAONB peatlands survey and shown in the current report, in more detail.

3.2.6 LiDAR Analysis

A detailed LiDAR image of the wider study area was obtained from the Environment Agency (DTM 50cm-1m 2019/20) via the National Library of Scotland (Illus. 06). The LiDAR image was enhanced using image manipulation software, and georeferenced in GIS software, to assess the proposed study area for earthworks of potential archaeological interest. Numerous, sinuous but linear erosional earthworks are visible across the study area, mirroring all of the features identified in the NPAOND peatlands survey as requiring archaeological investigation.

3.2.7 Site Inspection

Following desk-based investigations using the NPAONB peatland survey, combined with analysis of historic maps, aerial images and LiDAR, visits were made to the site by staff of the Archaeological Practice Ltd. on three occasions – January 23rd 2022, February 8th 2023 and March 1st 2023 - in the Winter of 2022-23 to inspect the linear features identified. Where visible, the peat-mineral interface of each feature was inspected for any indications of past human activity in the form of built features, ecofacts such as timber posts and artifacts such as worked stone tools. It was proposed to sample any potential features or eco-artefact assemblages for subsequent analysis, recording each such sample via the 'ArcGIS Survey123' mobile app to retrieve a precise geolocation of each sample point (*see Illus. 03*), photographs of the location (*see Photos 1-410*), a unique sample ID and a brief overview of each sample recorded (*see Section 4, Table 1*). Where no samples were found, intermittent points (approx. every 10-20 m) were collected as the survey was carried out to evidence the lack of finds and to ensure each area was sufficiently assessed. The principal observations derived from the inspection have also been included in the discussions below (see *Section 5*).

4. RESULTS

The following table has been extracted from the 'ArcGIS Survey 123' mobile app, used by staff of the Archaeological Practice Ltd. during the Geltsdale archaeological survey to record each linear feature sample/intermittent point. The point IDs are keyed to the photographic record, with equivalent numbers. See 3.2.7 above for further details on how the survey was undertaken.

Table 1:

Point/Photo ID	[* Peat/mineral interface] X=PMI* not visible; Z= PMI visible	X coord	Y coord	Further investigation required?	Notes
1	X	362253.8	552831.1	No	No finds observed
2	X	362256.9	552824	No	No finds observed
3	X	362252.9	552831.1	No	No finds observed
4	X	362250.5	552839.9	No	No finds observed
5	X	362251.8	552839.4	No	No finds observed
6	X	362258.8	552931.3	No	No finds observed
7	X	362259.7	552932.9	No	No finds observed
8	X	362265.2	552936.9	No	No finds observed
9	X	362261.4	552946.6	No	No finds observed
10	X	362242.8	552981.6	No	No finds observed
11	X	362242.7	552982.4	No	No finds observed
12	X	362246.8	552986	No	No finds observed
13	X	362264.7	552992.7	No	No finds observed
14	X	362275.5	552999.3	No	No finds observed
15	Z	362211.2	552923.4	No	No finds observed
16	X	362194.9	552936.9	No	No finds observed
17	X	362199.2	552947.9	No	No finds observed
18	X	362200.9	552949.3	No	No finds observed
19	X	362194.8	552959.4	No	No finds observed
20	X	362195.9	552966.5	No	No finds observed
21	X	362181.9	552976.6	No	No finds observed
22	X	362169.3	552969.3	No	No finds observed
23	X	362161.2	552965.1	No	No finds observed
24	X	362147.7	552958.5	No	No finds observed
25	X	362145.1	552950.6	No	No finds observed
26	X	362145	552950.3	No	No finds observed
27	X	362134.8	552957.6	No	No finds observed
28	X	362153.2	552983.4	No	No finds observed
29	X	362165	552987.4	No	No finds observed
30	X	362177.4	552982.3	No	No finds observed
31	X	362183	552997	No	No finds observed
32	X	362175.5	552994	No	No finds observed
33	X	362148.2	552995.8	No	No finds observed
34	X	362154.4	552989.8	No	No finds observed

35	X	362153.3	553022.6	No	No finds observed
36	X	362138.6	553029.3	No	No finds observed
37	X	362124.8	553024	No	No finds observed
38	X	362117.6	553016.7	No	No finds observed
39	X	362120.7	553000.8	No	No finds observed
40	X	362115.7	552995.2	No	No finds observed
41	Z	362055.9	552993.3	No	No finds observed
42	Z	362050.1	552991.5	No	No finds observed
43	X	362034.1	552987.4	No	No finds observed
44	Z	362023.8	552987.9	No	No finds observed
45	Z	362015.8	552986.6	No	No finds observed
46	Z	362005.3	552983.8	No	No finds observed
47	Z	362002.4	552977.7	No	No finds observed
48	Z	361996.2	552959.5	No	No finds observed
49	Z	362001.9	552963.1	No	No finds observed
50	X	361958.9	552927.1	No	No finds observed
51	X	361949.8	552921.4	No	No finds observed
52	X	361938.5	552916.2	No	No finds observed
53	X	361927.7	552911.8	No	No finds observed
54	X	361914.6	552902.7	No	No finds observed
55	X	361904.6	552895.2	No	No finds observed
56	X	361886.8	552896.9	No	No finds observed
57	X	361875.7	552889.7	No	No finds observed
58	X	361862.6	552888.9	No	No finds observed
59	X	361845.8	552886.1	No	No finds observed
60	X	361822	552876.5	No	No finds observed
61	X	361810	552874.8	No	No finds observed
62	X	361795.6	552869	No	No finds observed
63	X	361780.8	552872.2	No	No finds observed
64	X	361864.1	552897.9	No	No finds observed
65	X	361864.2	552898.3	No	No finds observed
66	X	361892.1	552910.8	No	No finds observed
67	X	361909.4	552923.2	No	No finds observed
68	X	361921.3	552935	No	No finds observed
69	X	361931.1	552941.7	No	No finds observed
70	X	361940.5	552941.9	No	No finds observed
71	X	361945.5	552945.2	No	No finds observed
72	Z	361897.8	552956.3	No	No finds observed
73	Z	361896.7	552952.7	No	No finds observed
74	Z	361847.2	552964.3	No	No finds observed
75	Z	361861.8	552968.1	No	No finds observed
76	X	361878.4	552970.7	No	No finds observed
77	Z	361880.7	552968.2	No	No finds observed
78	Z	361894.6	552975.8	No	No finds observed
79	Z	361908.8	552975.6	No	No finds observed

80	X	361913.7	552976.4	No	No finds observed
81	Z	361924.5	552978	No	No finds observed
82	X	361931.5	552987.2	No	No finds observed
83	X	361945.5	552992.4	No	No finds observed
84	X	361955.4	553006.6	No	No finds observed
85	X	361948.4	553010.5	No	No finds observed
86	X	361937.4	553010.6	No	No finds observed
87	Z	361988	553022.6	No	No finds observed
88	Z	361995	553024.4	No	No finds observed
89	Z	362001.3	553029.7	No	No finds observed
90	Z	362008.9	553031.2	No	No finds observed
91	Z	362015	553036.2	No	No finds observed
92	X	362021.1	553043.6	No	No finds observed
93	Z	362026.6	553045.7	No	No finds observed
94	X	362037.8	553049.6	No	No finds observed
95	X	362027.1	553029	No	No finds observed
96	Z	362027.4	553028.8	No	No finds observed
97	X	362035.9	553042.4	No	No finds observed
98	Z	362045.4	553044.6	No	No finds observed
99	Z	362050.1	553050.7	No	No finds observed
100	Z	362058.2	553051.2	No	No finds observed
101	X	362070.4	553057.9	No	No finds observed
102	X	362080.5	553065.8	No	No finds observed
103	X	362088.2	553069.2	No	No finds observed
104	X	362092.1	553078	No	No finds observed
105	X	362093.6	553084.7	No	No finds observed
106	X	362097.3	553037.5	No	No finds observed
107	X	362093.8	553042.3	No	No finds observed
108	X	362097.3	553045	No	No finds observed
109	X	362083.5	553046.3	No	No finds observed
110	X	362078.7	553033.5	No	No finds observed
111	X	362084.9	553029.7	No	No finds observed
112	X	362084.5	553018.9	No	No finds observed
113	X	362083.8	553029.8	No	No finds observed
114	X	362085.9	553031.7	No	No finds observed
115	X	362069.8	553038.3	No	No finds observed
116	X	362056.9	553031.5	No	No finds observed
117	Z	362047.2	553023.6	No	No finds observed
118	X	362036.7	553020.9	No	No finds observed
119	Z	362007.8	553015.2	No	No finds observed
120	Z	362000.5	553013.1	No	No finds observed
121	X	361994.2	553007.1	No	No finds observed
122	Z	362025.8	553099.9	No	No finds observed
123	Z	362018.6	553098	No	No finds observed
124	X	362012.6	553095.4	No	No finds observed

125	X	362031.6	553107.7	No	No finds observed
126	Z	362033.5	553099.6	No	No finds observed
127	Z	362038.1	553108	No	No finds observed
128	Z	362042.2	553106.3	No	No finds observed
129	Z	362046.8	553110.5	No	No finds observed
130	Z	362051.7	553120.1	No	No finds observed
131	X	362053.3	553124.1	No	No finds observed
132	X	362065.8	553144.3	No	No finds observed
133	Z	362066	553149.4	No	No finds observed
134	Z	362069.6	553158.6	No	No finds observed
135	Z	362072.5	553163.3	No	No finds observed
136	Z	362070.2	553169.2	No	No finds observed
137	X	362071.5	553167.1	No	No finds observed
138	X	362066.1	553173.1	No	No finds observed
139	X	362066.3	553177	No	No finds observed
140	X	362149.6	553395	No	No finds observed
141	X	362126.5	553387.2	No	No finds observed
142	X	362126.5	553381.1	No	No finds observed
143	X	362128.8	553365.6	No	No finds observed
144	X	362146.2	553372.7	No	No finds observed
145	X	362145.3	553372.2	No	No finds observed
146	X	362142.3	553369.1	No	No finds observed
147	X	362136.4	553362.7	No	No finds observed
148	X	362125.7	553369.1	No	No finds observed
149	X	362119.4	553366.1	No	No finds observed
150	X	362113.9	553352.8	No	No finds observed
151	X	362113.1	553350.6	No	No finds observed
152	X	362116.6	553340.8	No	No finds observed
153	X	362115.3	553329.9	No	No finds observed
154	X	362109	553321.2	No	No finds observed
155	X	362094.4	553306.3	No	No finds observed
156	Z	362101	553306	No	No finds observed
157	Z	362114.7	553313.1	No	No finds observed
158	Z	362117.2	553315.8	No	No finds observed
159	Z	362121.3	553281.9	No	No finds observed
160	X	362117.7	553275.3	No	No finds observed
161	X	362119.4	553268.1	No	No finds observed
162	X	362124.5	553257.6	No	No finds observed
163	X	362098.4	553303.2	No	No finds observed
164	X	362081.3	553282.7	No	No finds observed
165	X	362077.6	553285	No	No finds observed
166	X	362083.1	553308.9	No	No finds observed
167	X	362090	553328.2	No	No finds observed
168	X	362074.2	553312.8	No	No finds observed
169	Z	362068	553304.6	No	No finds observed

170	X	362067	553283.4	No	No finds observed
171	Z	362068.1	553276.1	No	No finds observed
172	Z	362062.3	553287.9	No	No finds observed
173	X	362057.9	553274.6	No	No finds observed
174	Z	362056.8	553273.4	No	No finds observed
175	X	362122.9	553319.4	No	No finds observed
176	Z	362117.4	553309	No	No finds observed
177	Z	362109	553302.9	No	No finds observed
178	Z	362095.1	553297.4	No	No finds observed
179	Z	362088.9	553287.3	No	No finds observed
180	X	362085	553277.1	No	No finds observed
181	X	362073.2	553262.9	No	No finds observed
182	X	362057.6	553253.4	No	No finds observed
183	Z	362057.8	553252.3	No	No finds observed
184	Z	362046.1	553246.2	No	No finds observed
185	X	362029.2	553226.7	No	No finds observed
186	Z	362014.3	553216.5	No	No finds observed
187	Z	362002	553202.1	No	No finds observed
188	Z	361998.1	553198.3	No	No finds observed
189	Z	361990.7	553189.2	No	No finds observed
190	X	361982.8	553176.5	No	No finds observed
191	X	361981.1	553162.3	No	No finds observed
192	X	361976.5	553161.3	No	No finds observed
193	X	361962.6	553154.7	No	No finds observed
194	Z	361953.2	553138.4	No	No finds observed
195	X	361943.2	553125.9	No	No finds observed
196	X	361924.7	553115.8	No	No finds observed
197	X	361909.8	553100.1	No	No finds observed
198	X	361897	553084.3	No	No finds observed
199	Z	361914.7	553111.7	No	No finds observed
200	Z	361966.4	553080.7	No	No finds observed
201	X	361958.5	553080	No	No finds observed
202	X	361947.2	553064.9	No	No finds observed
203	X	361931.6	553055.8	No	No finds observed
204	X	361923.6	553050.4	No	No finds observed
205	X	361902.6	553043.8	No	No finds observed
206	X	361728.2	553023.9	No	No finds observed
207	X	361718.4	553014.9	No	No finds observed
208	X	361706.8	553008.9	No	No finds observed
209	X	361693.1	552997.6	No	No finds observed
210	X	361656.3	552985	No	No finds observed
211	X	361645.4	552978.5	No	No finds observed
212	X	361664.8	553007.3	No	No finds observed
213	X	361676.6	553013.1	No	No finds observed
214	X	361691.3	553020.5	No	No finds observed

215	X	361708	553037.7	No	No finds observed
216	X	361725.1	553051.3	No	No finds observed
217	X	361736	553064.1	No	No finds observed
218	X	361754.3	553080.9	No	No finds observed
219	X	361762	553092	No	No finds observed
220	X	361772.9	553105.5	No	No finds observed
221	X	361776.2	553123.8	No	No finds observed
222	Z	361784	553126.6	No	No finds observed
223	Z	361796.2	553141.1	No	No finds observed
224	X	361803.4	553147.9	No	No finds observed
225	Z	361817.6	553156.8	No	No finds observed
226	X	361828	553164.2	No	No finds observed
227	X	361840.7	553177.1	No	No finds observed
228	Z	361847.6	553178.8	No	No finds observed
229	X	361855.5	553183	No	No finds observed
230	X	361783.3	553111.4	No	No finds observed
231	Z	361788.2	553124.6	No	No finds observed
232	Z	361799.4	553134.6	No	No finds observed
233	Z	361807	553137.8	No	No finds observed
234	Z	361826.5	553145.2	No	No finds observed
235	X	361833.3	553149.1	No	No finds observed
236	X	361847.8	553163	No	No finds observed
237	Z	361861.9	553169.7	No	No finds observed
238	Z	361865.5	553174.1	No	No finds observed
239	Z	361876.2	553176.4	No	No finds observed
240	X	361888.1	553180.5	No	No finds observed
241	X	361888.1	553180.5	No	No finds observed
242	X	361891.4	553188.5	No	No finds observed
243	X	361901.1	553184.9	No	No finds observed
244	X	361918.2	553186.3	No	No finds observed
245	Z	361922.1	553187.5	No	No finds observed
246	X	361931.2	553193	No	No finds observed
247	Z	361939.5	553193.8	No	No finds observed
248	X	361947.1	553209.3	No	No finds observed
249	X	361953.4	553212.4	No	No finds observed
250	Z	361964.9	553221.8	No	No finds observed
251	X	361947.5	553194.5	No	No finds observed
252	Z	361960.8	553198.7	No	No finds observed
253	X	361971	553215.4	No	No finds observed
254	X	361977.2	553212.9	No	No finds observed
255	X	361981.5	553217.2	No	No finds observed
256	Z	361990.9	553225.2	No	No finds observed
257	X	362004.1	553259.7	No	No finds observed
258	X	362010.3	553268.6	No	No finds observed
259	X	362015.9	553283.6	No	No finds observed

260	X	362019.6	553293.3	No	No finds observed
261	Z	362028.1	553302.4	No	No finds observed
262	Z	362029.1	553309	No	No finds observed
263	X	362036.7	553297.1	No	No finds observed
264	X	362040.7	553315.9	No	No finds observed
265	X	362052.7	553339.9	No	No finds observed
266	X	362063	553355.9	No	No finds observed
267	X	362064	553363.9	No	No finds observed
268	X	362096.6	553381.1	No	No finds observed
269	X	362090.6	553398.2	No	No finds observed
270	X	362111.2	553419	No	No finds observed
271	X	362129.9	553425	No	No finds observed
272	X	362148	553430.7	No	No finds observed
273	X	362160.1	553440.3	No	No finds observed
274	X	362111.3	553418.6	No	No finds observed
275	X	362099.3	553407.9	No	No finds observed
276	X	362087.2	553412.2	No	No finds observed
277	X	362083.8	553409.2	No	No finds observed
278	X	362074.1	553412.5	No	No finds observed
279	X	362074.7	553427.2	No	No finds observed
280	X	362071.7	553437.2	No	No finds observed
281	X	362026.2	553415.2	No	No finds observed
282	X	362018.1	553419.9	No	No finds observed
283	X	362012.1	553415.9	No	No finds observed
284	X	362006.2	553404.4	No	No finds observed
285	X	362027.7	553402.4	No	No finds observed
286	Z	362024.3	553396.5	No	No finds observed
287	X	362018.4	553374.8	No	No finds observed
288	X	362037.6	553381	No	No finds observed
289	X	362044.8	553387.7	No	No finds observed
290	X	362048	553399	No	No finds observed
291	X	361732.5	553109.2	No	No finds observed
292	X	361721.8	553102.8	No	No finds observed
293	Z	361705.1	553089.5	No	No finds observed
294	X	361679.7	553082.1	No	No finds observed
295	Z	361664.8	553074.1	No	No finds observed
296	Z	361651.9	553065.9	No	No finds observed
297	Z	361640.2	553063.3	No	No finds observed
298	Z	361623.8	553050.3	No	No finds observed
299	Z	361618.7	553044.6	No	No finds observed
300	Z	361598	553034.5	No	No finds observed
301	Z	361584.9	553028.5	No	No finds observed
302	Z	361575.1	553025.1	No	No finds observed
303	Z	361567.8	553020.5	No	No finds observed
304	Z	361555.1	553013.3	No	No finds observed

305	Z	361547.3	553008.4	No	No finds observed
306	X	361537	553000	No	No finds observed
307	Z	361510	553021	No	No finds observed
308	Z	361510.5	553022.2	No	No finds observed
309	Z	361525.8	553026.7	No	No finds observed
310	Z	361534.8	553026.1	No	No finds observed
311	Z	361544.4	553035.5	No	No finds observed
312	Z	361549.9	553039.2	No	No finds observed
313	Z	361572	553051.5	No	No finds observed
314	Z	361594.1	553057.6	No	No finds observed
315	Z	361609.1	553062.6	No	No finds observed
316	Z	361616.1	553067.1	No	No finds observed
317	X	361627.6	553081.9	No	No finds observed
318	X	361627.8	553089.8	No	No finds observed
319	X	361684	553103.6	No	No finds observed
320	X	361691.7	553111.3	No	No finds observed
321	X	361696.1	553115.9	No	No finds observed
322	Z	361739.9	553147.3	No	No finds observed
323	X	361757.3	553156.8	No	No finds observed
324	X	361763.8	553167.9	No	No finds observed
325	X	361696.8	553170.5	No	No finds observed
326	Z	361703.2	553174.2	No	No finds observed
327	Z	361718.3	553181.5	No	No finds observed
328	Z	361736.5	553188.6	No	No finds observed
329	Z	361750.7	553196.8	No	No finds observed
330	X	361765	553204.2	No	No finds observed
331	Z	361783.8	553215.4	No	No finds observed
332	Z	361783.8	553215.4	No	No finds observed
333	Z	361797.3	553226.7	No	No finds observed
334	Z	361809.3	553236.4	No	No finds observed
335	Z	361830.9	553243.6	No	No finds observed
336	Z	361841.4	553256.1	No	No finds observed
337	Z	361857.4	553265.7	No	No finds observed
338	X	361871.4	553272.2	No	No finds observed
339	X	361858.5	553232	No	No finds observed
340	X	361851.1	553222.2	No	No finds observed
341	X	361825.4	553203.6	No	No finds observed
342	Z	361844.3	553188.5	No	No finds observed
343	X	361848.6	553192.5	No	No finds observed
344	X	361864.5	553201.9	No	No finds observed
345	Z	361869.1	553216.3	No	No finds observed
346	Z	361876.9	553222.7	No	No finds observed
347	Z	361886.7	553234.3	No	No finds observed
348	Z	361894.8	553235.7	No	No finds observed
349	X	361906.1	553246.5	No	No finds observed

350	Z	361909.4	553257.6	No	No finds observed
351	X	361924.8	553263.9	No	No finds observed
352	X	361924.1	553270	No	No finds observed
353	Z	361934.2	553283.1	No	No finds observed
354	X	361947.4	553295.8	No	No finds observed
355	X	361961.2	553320.8	No	No finds observed
356	X	361967.8	553340.7	No	No finds observed
357	X	361996.2	553368.2	No	No finds observed
358	X	362040	553367.3	No	No finds observed
359	Z	362035.7	553359.8	No	No finds observed
360	Z	362020.8	553345.3	No	No finds observed
361	Z	362011.8	553342.5	No	No finds observed
362	Z	361996.6	553334.3	No	No finds observed
363	X	361998.3	553317.9	No	No finds observed
364	Z	361993.9	553312.1	No	No finds observed
365	Z	361973.7	553298.6	No	No finds observed
366	X	361963.2	553272.1	No	No finds observed
367	X	361958.8	553267.5	No	No finds observed
368	Z	361948.6	553260.4	No	No finds observed
369	X	361940.7	553250.1	No	No finds observed
370	X	361940.7	553240.8	No	No finds observed
371	X	361937.3	553239.5	No	No finds observed
372	X	361929	553225	No	No finds observed
373	Z	361914.3	553211.1	No	No finds observed
374	X	361895.9	553203.1	No	No finds observed
375	X	361980.6	553265	No	No finds observed
376	X	361979.2	553258.9	No	No finds observed
377	X	361969.2	553248.9	No	No finds observed
378	Z	361976.1	553232.9	No	No finds observed
379	X	361976.8	553229.3	No	No finds observed
380	X	361865.4	553245.6	No	No finds observed
381	X	361875.8	553257	No	No finds observed
382	X	361888.2	553264.3	No	No finds observed
383	X	361897	553278.1	No	No finds observed
384	Z	361906.9	553279.1	No	No finds observed
385	Z	361903.2	553285.4	No	No finds observed
386	Z	361907.5	553293.9	No	No finds observed
387	X	361918.8	553302.6	No	No finds observed
388	X	361922.8	553304.6	No	No finds observed
389	X	361919.9	553306.7	No	No finds observed
390	X	361917.7	553322.2	No	No finds observed
391	X	361925.6	553319.8	No	No finds observed
392	X	361930.1	553329.3	No	No finds observed
393	X	361936.7	553342.6	No	No finds observed
394	X	361951.8	553355.8	No	No finds observed

395	X	361934.9	553371.4	No	No finds observed
396	X	361933	553358.5	No	No finds observed
397	Z	361928.6	553343.1	No	No finds observed
398	X	361901.1	553308.8	No	No finds observed
399	X	361895.8	553305.3	No	No finds observed
400	X	361892.1	553325.2	No	No finds observed
401	X	361878.5	553314.5	No	No finds observed
402	X	361865.8	553308.3	No	No finds observed
403	X	361869	553301.2	No	No finds observed
404	X	361864.8	553291.4	No	No finds observed
405	Z	361860.9	553289.7	No	No finds observed
406	Z	361851.6	553284.7	No	No finds observed
407	X	361845.4	553272.2	No	No finds observed
408	X	361853	553270.2	No	No finds observed
409	X	362013.1	553314.3	No	No finds observed
410	X	362017.2	553302.8	No	No finds observed

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of survey data

A total of **410** sample/intermittent points were recorded within the Geltsdale Middle Top study area, of which **273** (66.6%) were identified as having no visible peat/mineral interface) PMI, with **137** (33.4%) identified as having a visible PMI where associated finds of artifacts might be expected. No features or finds of archaeological significance were observed within any of the sample areas, however.

5.2 Conclusions

Assessment of the linear erosional features, identified in the NPAONB peatlands survey for the Geltsdale study area provided no evidence of archaeological features or finds; specifically, no remains of any kind indicative of prehistoric occupation or activity prior to the formation of the existing peat deposits. Based on these findings and taking note of the altitude range within which the survey took place, it is suggested that the Geltdale study area is unlikely to have been occupied or exploited intensively by prehistoric groups for any significant length of time, as seen at the Cow Green site which seems to have been used as a seasonal processing camp and occurs at a lower altitude in the south part of the NP-AONB. The most likely reasons for the reduced archaeological potential of the Geltdale site are its relatively high altitude - at a maximum of 595 metres AOD it is over 100 metres higher than Cow Green – which impacts negatively upon climatic conditions suitable for human occupation and leads to a reduction in available natural resources for human exploitation, including animal and vegetal resources as well as minerals that could be taken off site for domestic use or trade elsewhere. These factors, notwithstanding periodic climatic variation, suggest the uplands of Geltsdale are likely to have been unsuitable for prolonged human occupation during prehistory and in later periods, although it cannot be ruled out that the area may have been visited occasionally and seasonally for specific reasons associated with hunting, the gathering of berries and, perhaps, ceremonial activities, just as it is today and has been historically for purposes such as extensive pasturing and sport shooting. The likelihood that any retrievable remains were deposited in prehistory during such visits is rather smaller than for occupation sites, since the total amount of person time spent there is much reduced. Thus, the chances of retrieving such data over the very great areas involved in the current survey must be regarded as low in view of the lack of potential for such finds to have been deposited, the relatively small areas of peat/mineral interface exposed for investigation and erosional forces impacting upon them.

5.3 Recommendations

Recommendations emanating from the current study relate partly to the Geltsdale Middle Top site and rather more to potential future studies.

With respect to the Geltsdale Middle Top site, no features or finds were made during the survey which warrant further analysis or conservation. The only ecofact collected, identified by Palaeo-environmentalist Dr. Charlotte O'Brien as a heather root, is now considered invasive to the PMI location where it was recorded. Thus, it is not considered necessary, on the basis of the above archaeological survey, to carry out any further recording or evaluation works prior to the implementation of the peatland restoration techniques as outlined.

Although this moorland site seems likely to have been sparsely exploited through recorded history or prehistoric times, any archaeological features or finds appearing during the restoration works should be recorded and, if possible, retained by the groundworkers. To this end, consideration should be put to supplying the groundworks team with basic information on likely features and finds likely to be present and worthy of retention.

Should any finds be made during similar future investigations, recommendations would be provided on the basis of the perceived significance of features or finds collected or likely to be impacted and, with regard to features such as occupation sites and flint scatters, the level of risk in terms of their likely disturbance and ease of avoidance. In order to evaluate the risk to archaeological remains associated with peatland restoration techniques, a scoring system should be invoked, leading to defined mitigation strategies. It should be noted that in all cases where archaeological material is encountered, mitigation by avoidance is the preferred option, but for practical reasons in some cases where this is not an option, alternative approaches must be provided.

The absence of finds made during this investigation does not invalidate the value of carrying out future investigations of this kind, particularly at lower altitudes where the potential for human settlement and land-use is higher.

Although issues such as nesting, lambing and grouse-shooting seasons may conspire to force such work into the later Summer, autumn or Winter, such work should, by preference, be carried out in the Spring when vegetation remains low but daylight hours are extended, allowing longer fieldwork periods, and when both weather and conditions are more amenable to effective survey and recording methods.

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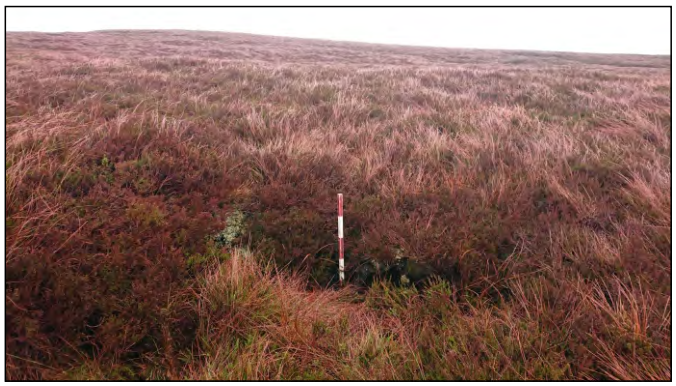

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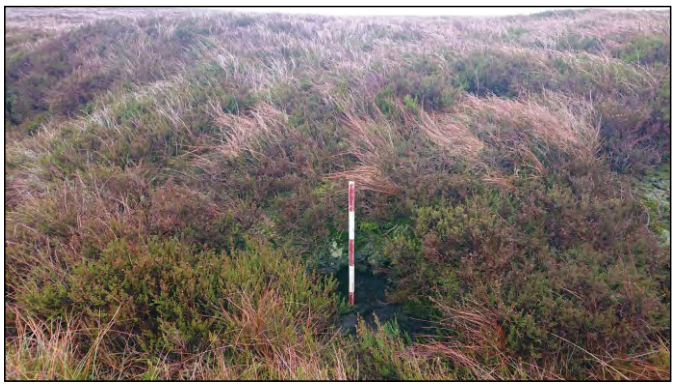

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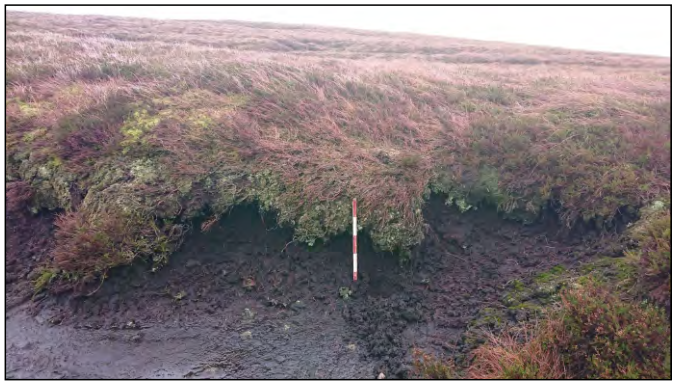

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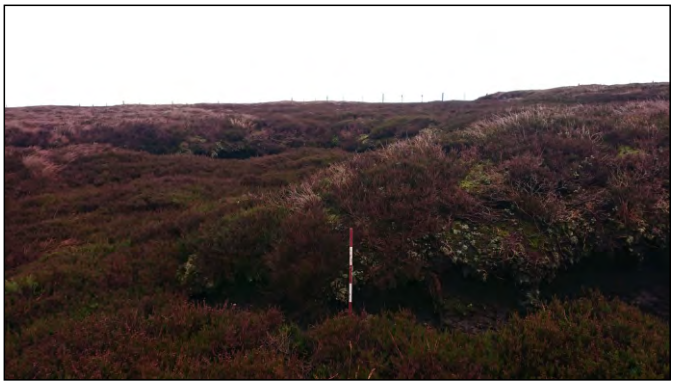

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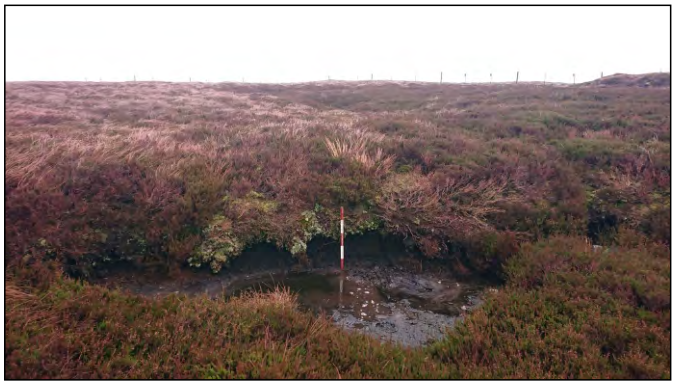

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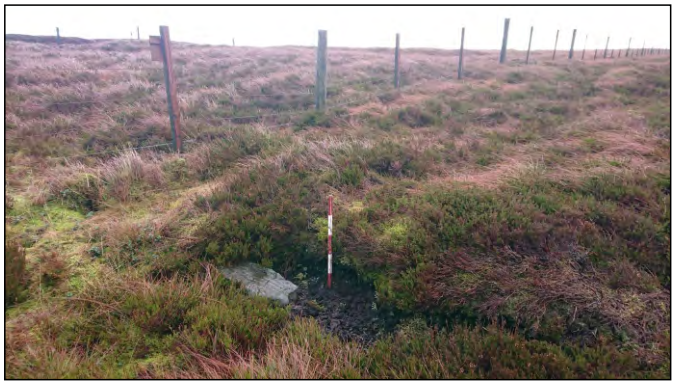

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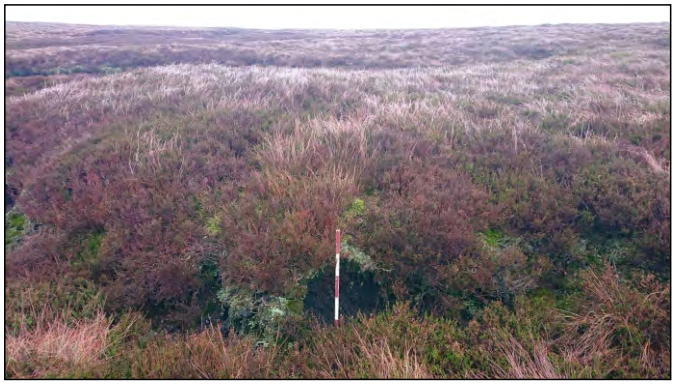

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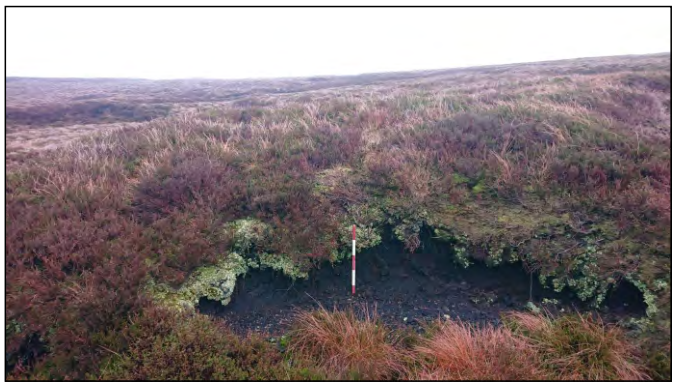

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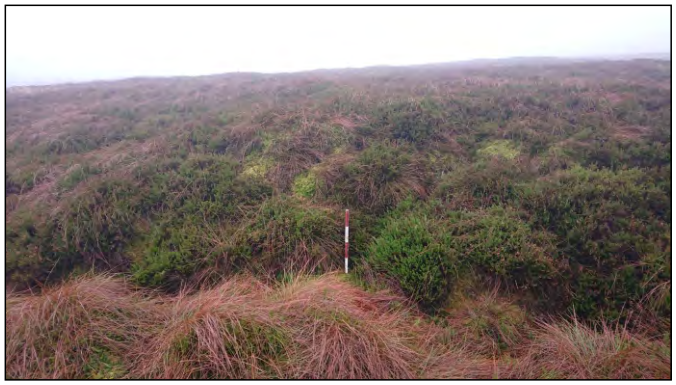

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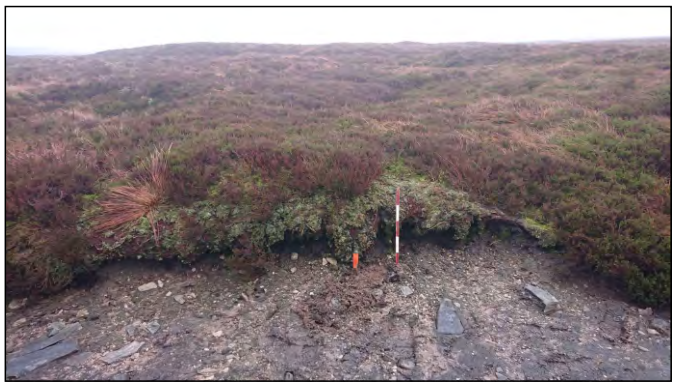

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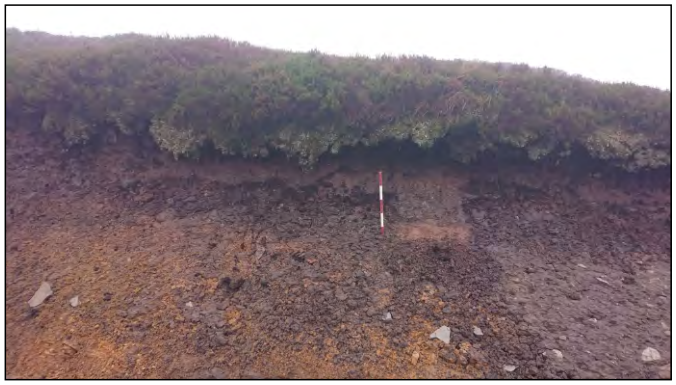

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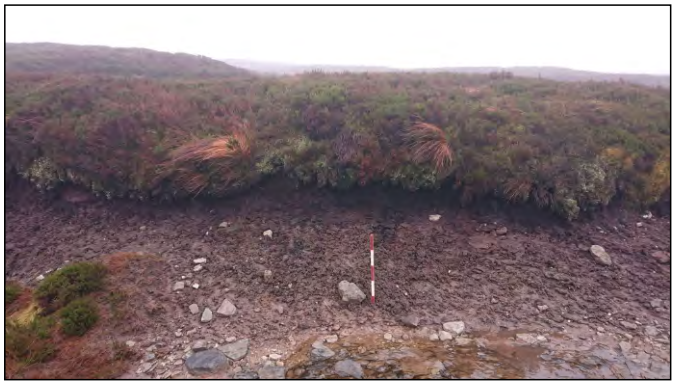

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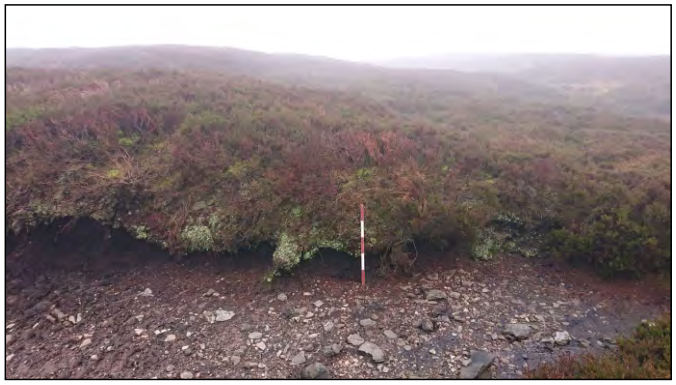

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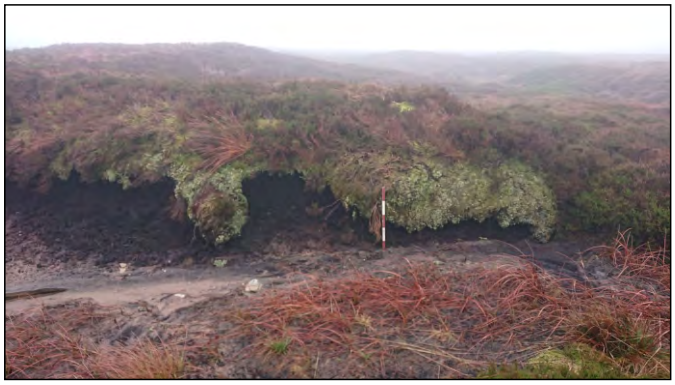

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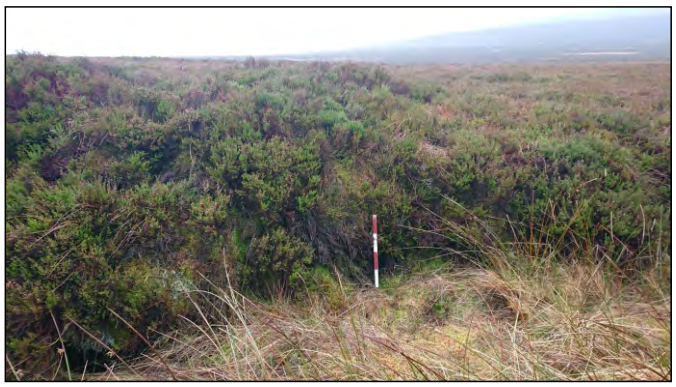

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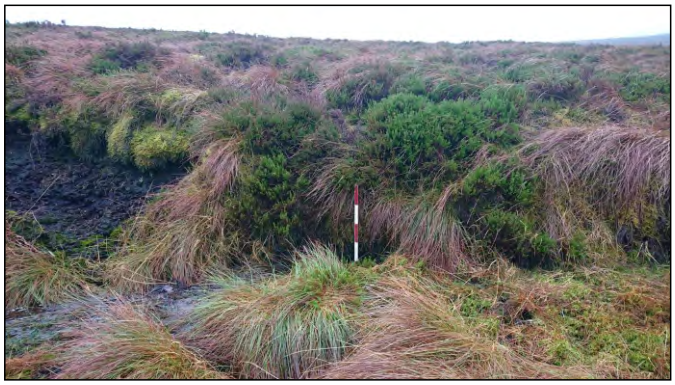

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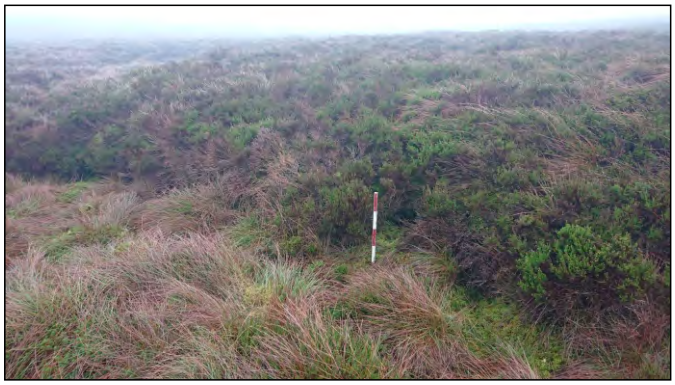

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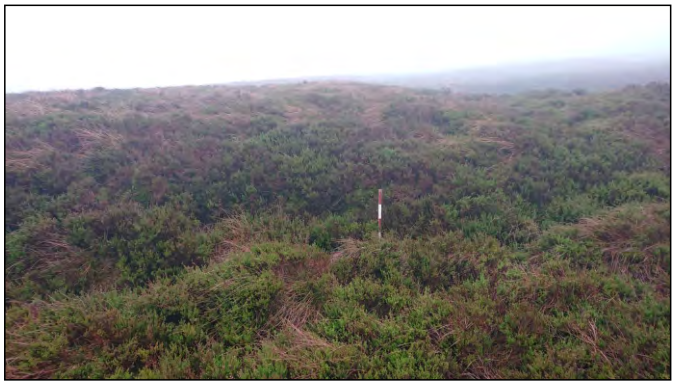

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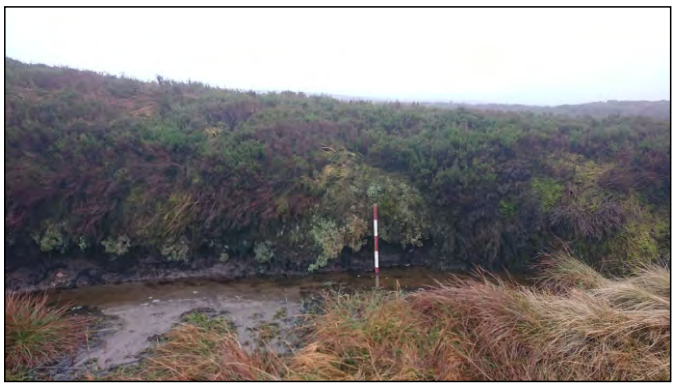

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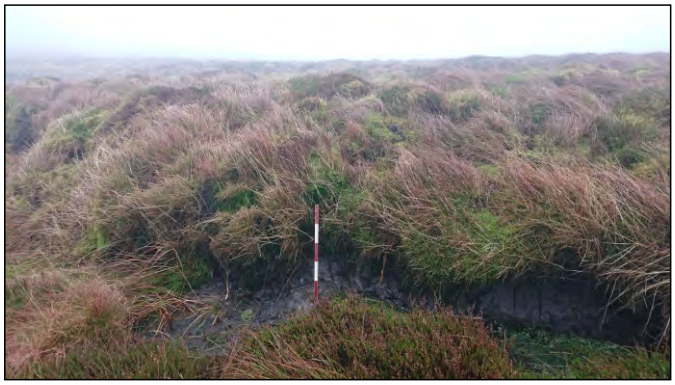

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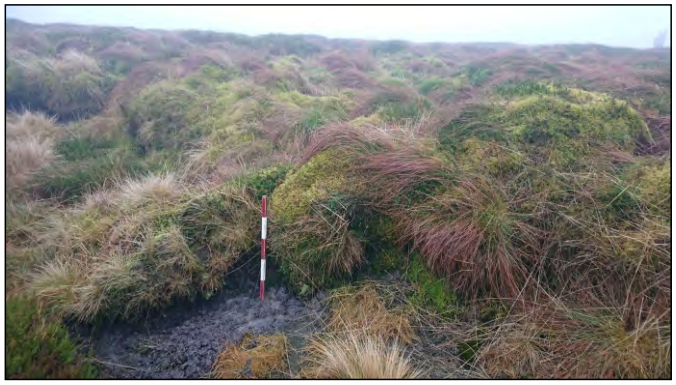

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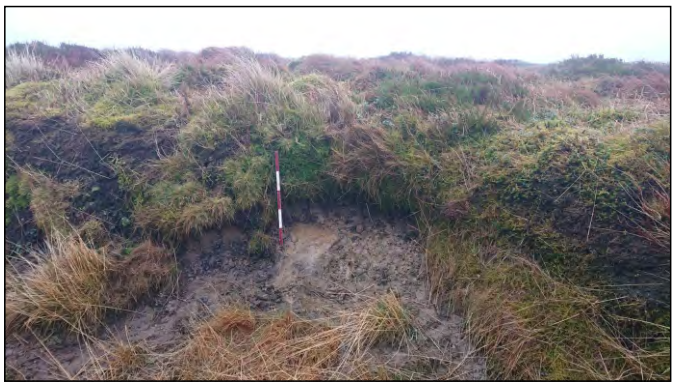

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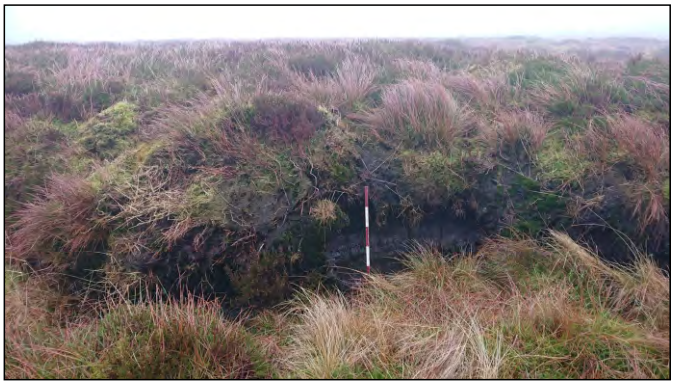

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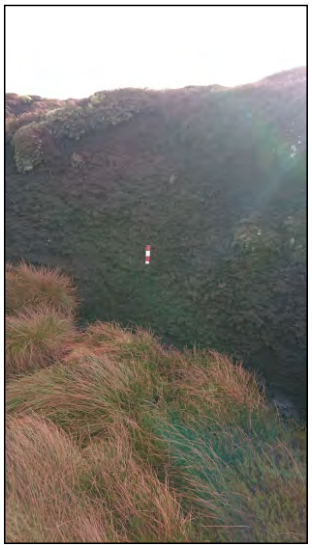

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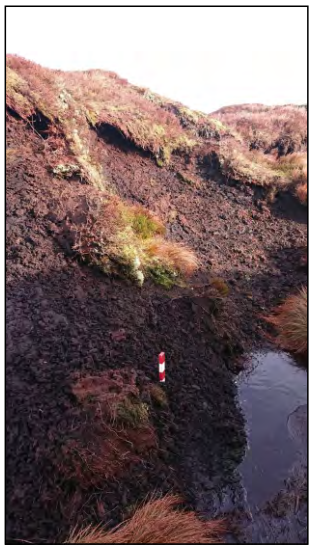

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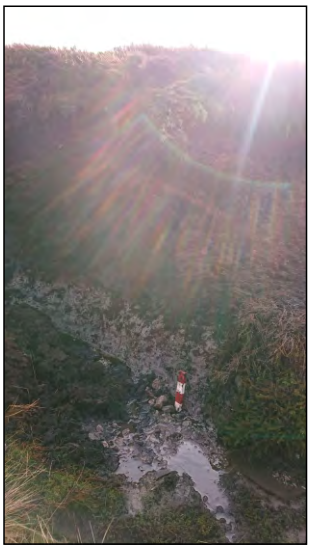

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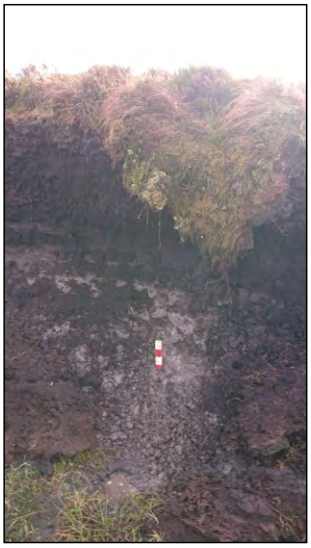

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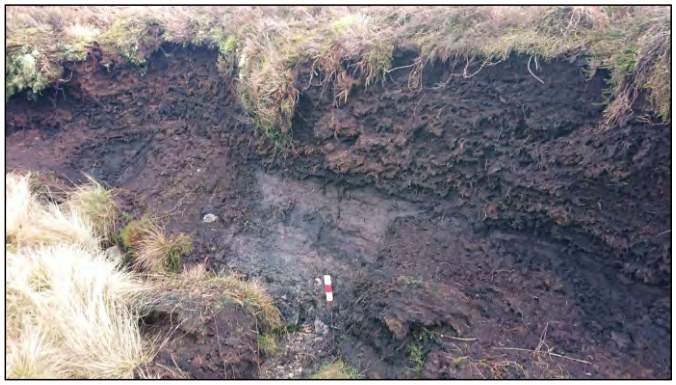

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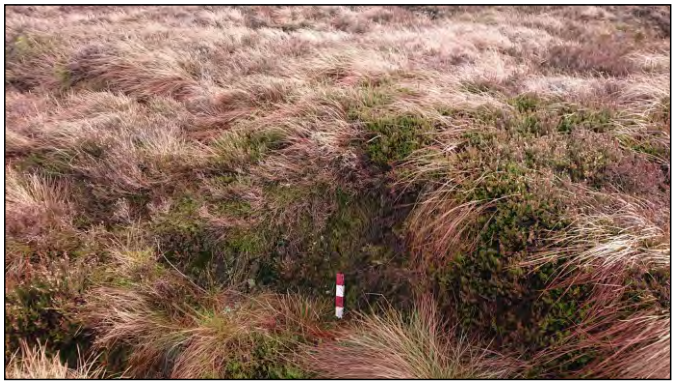

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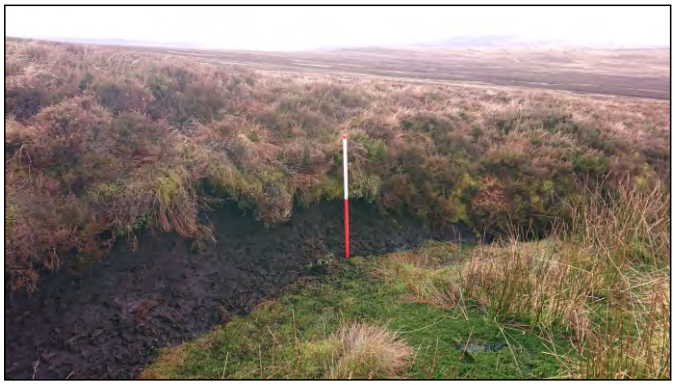

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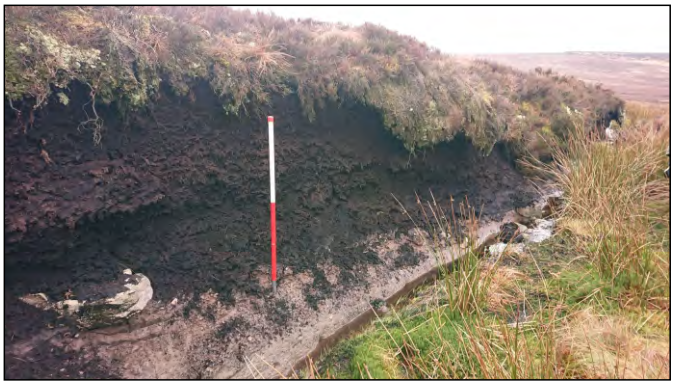

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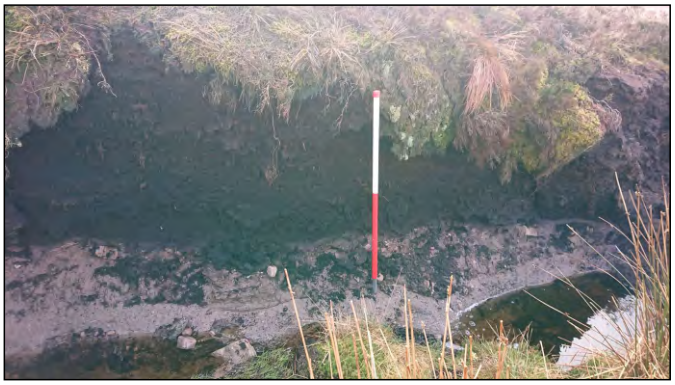

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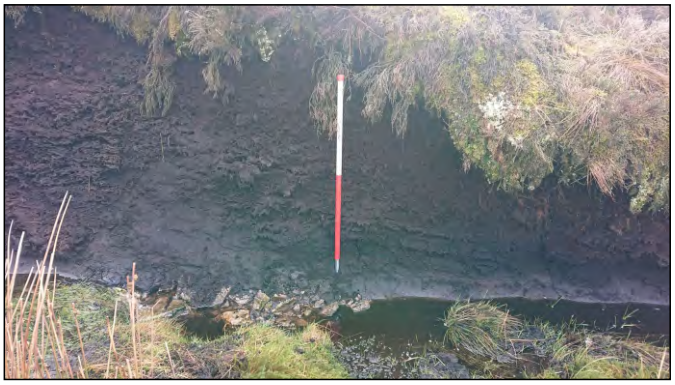

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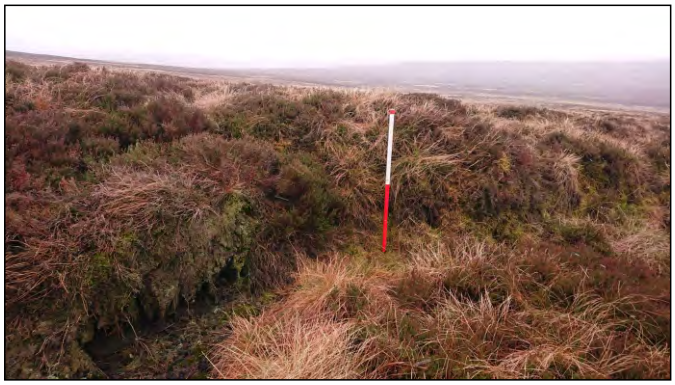

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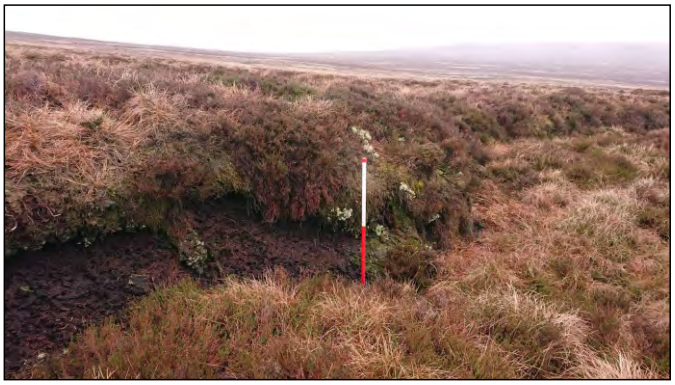

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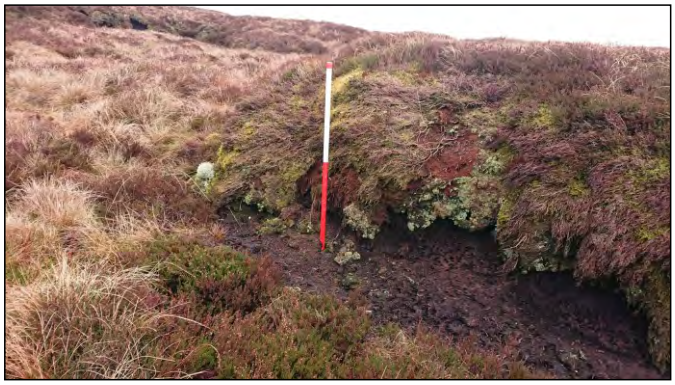

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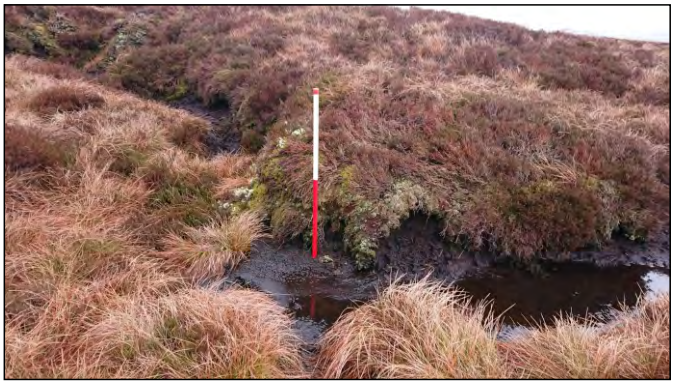

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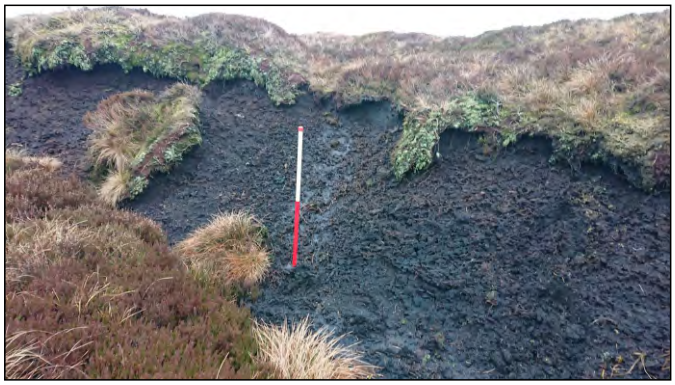

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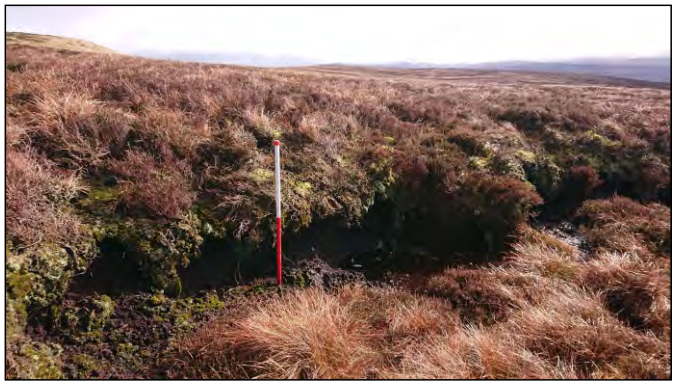

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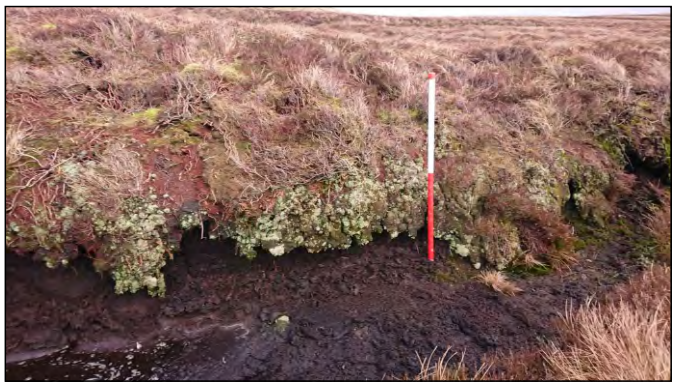

Photo 369.

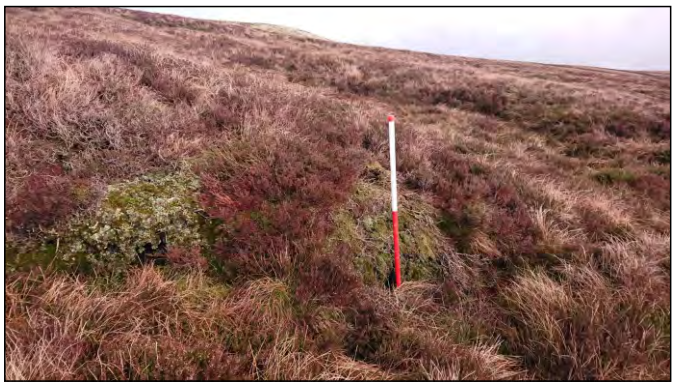

Photo 370.

Photo 371.

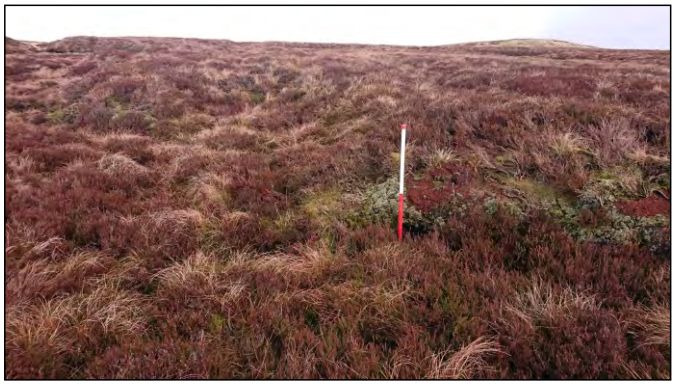

Photo 372.

Photo 373.

Photo 374.

Photo 375.

Photo 376.

Photo 377.

Photo 378.

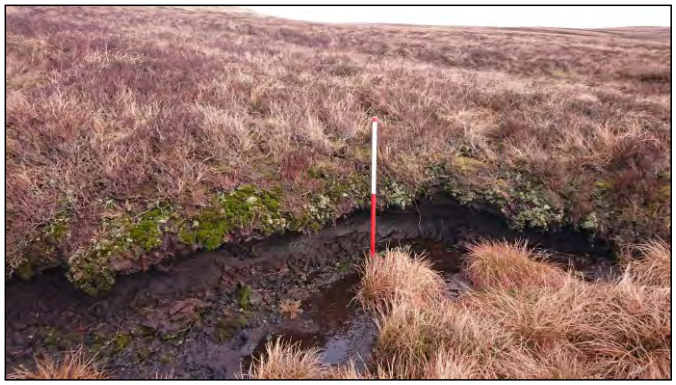

Photo 379.

Photo 380.

Photo 381.

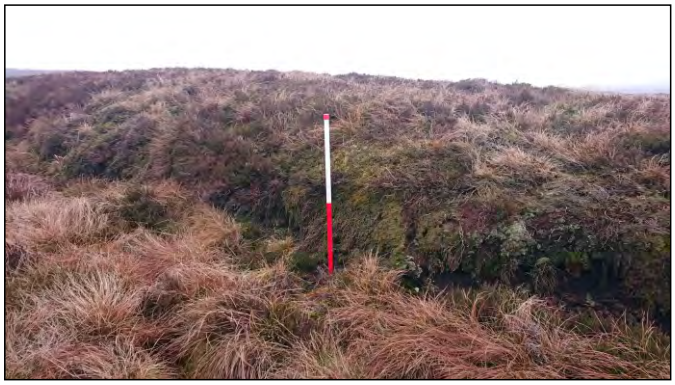

Photo 382.

Photo 383.

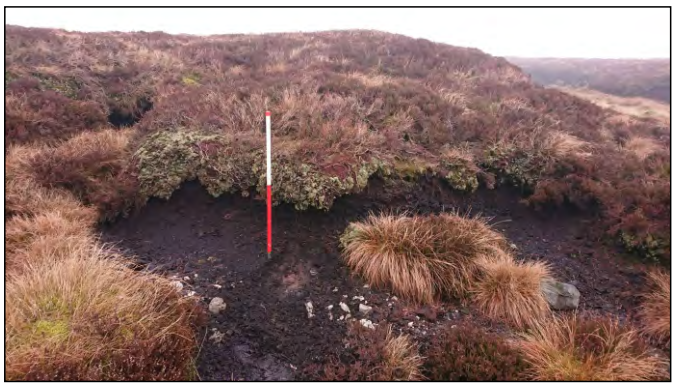

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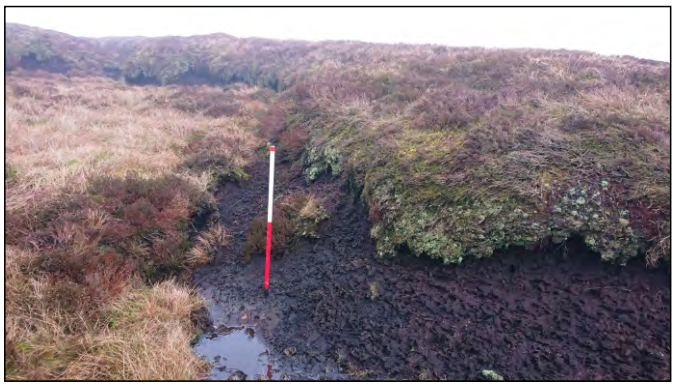
Photo 385.



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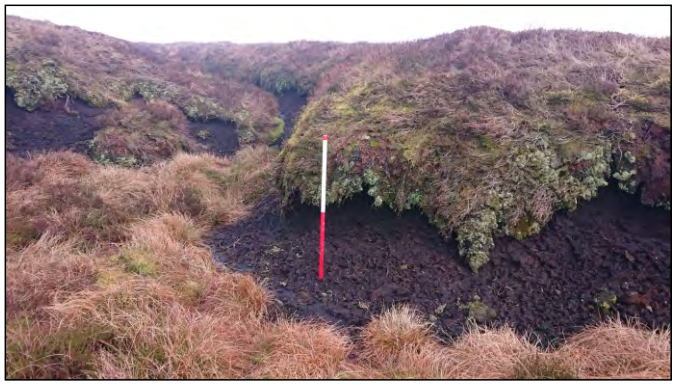

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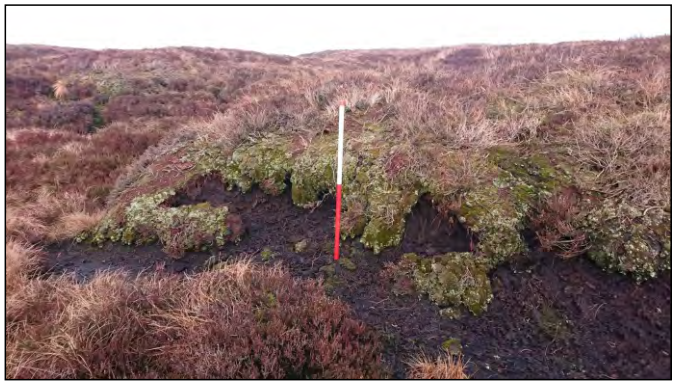

Photo 389.

Photo 390.

Photo 391.

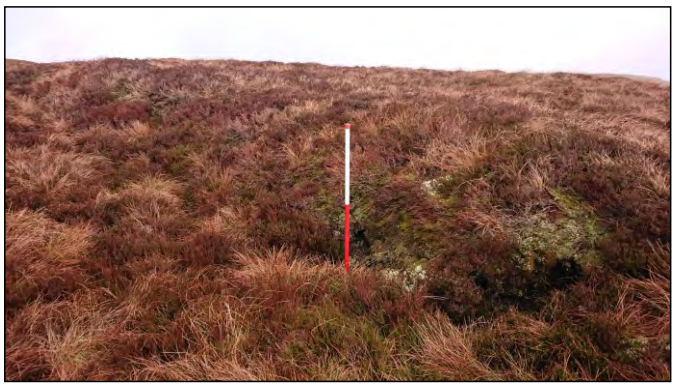

Photo 392.

Photo 393.

Photo 394.

Photo 395.

Photo 396.

Photo 397.

Photo 398.

Photo 399.

Photo 400.

Photo 401.

Photo 402.

Photo 403.

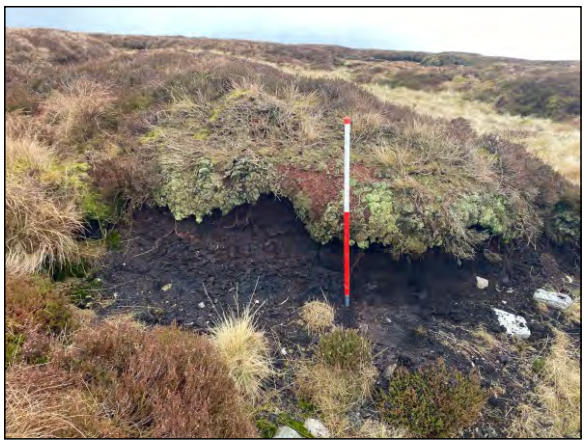

Photo 404.

Photo 405.

Photo 406.

Photo 407.

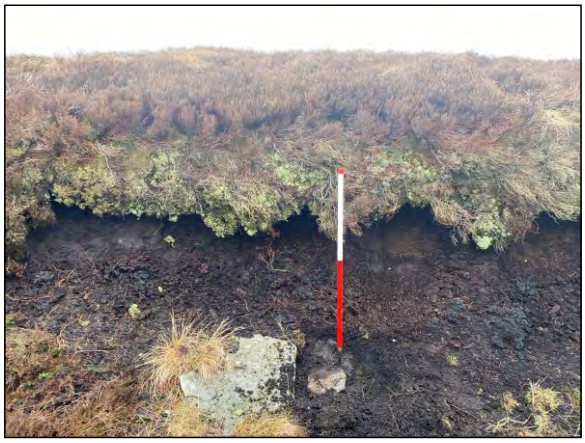

Photo 408.

Photo 409.

Photo 410.

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