An Early Multi-Period Landscape Revealed by Archaeological Survey

Swaledale, Melbecks CP: Gunnerside and Winterings to Feetham Pasture Survey 2016

Tim Laurie, Stephen Eastmead and John Russell.





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Cover Image

Figure: 1 Round Cairn (F9). The remnant of a once prominent, stone cairn on Low Row Pasture.

Chapter 1: The Survey

Chapter 1: The Survey

1.1 Introduction

The archaeological remains recorded here have, except where otherwise stated, been identified by Tim Laurie during occasional visits to walk the area over a period of almost forty years. The remains are usually slight and those on open moorland are often masked by vegetation and only visible after heather burns. Lithic finds are revealed from time to time in mole hills. In consequence, it can be asserted with confidence that no field walk at any one time could identify all the features described below.

Our aims and objectives in summarising this informal reconnaissance have been to provide the first comprehensive account of visible archaeological remains and surface finds from the high unenclosed pastures and open moorland eastward from Winterings Pasture, over Lodge Green and Heights to Feetham Pasture.



Figure: 2 View from Brownsey Level towards the River Swale valley with a complex ring cairn below the spoil heap. ©Stephen Eastmead

1.2 Survey Method

1.2.1 Equipment

The Swaledale and Arkengarthdale Archaeology Group (SWAAG) has a 'low end' professional GPS instrument: a Promark 120 GPS receiver, which was used in a 'single rover mode'.

The instrument and licenses SWAAG purchased limits its use to L1 frequency. GNSS: GPS and GLONASS satellites (typically 14) provided the map feature co-ordinates, when using either the internal or external aerial.

In practice, typical performances regarding X, Y accuracy after correction using Ordinance Survey

OS Net Rinex 1-minute correction data is:

- With external aerial <40cm frequently better than 15cm.
- With internal aerial <100cm frequently better than 60cm.

Chapter 1: The Survey

1.2.2 Software

- GNSS Solutions version 3.80.8 for GPS data correction using OS Net Rinex 1-minute correction data.
- QGIS Geographic Information System version 2.14.3
- Serif Draw Plus X5 Graphics Package
- GPS Utility GPS version 5.28
- Ordinance Survey Open Data maps
- openstreetmap.org
- Memory-Map version 6.1.0

1.2.3 Survey Data Process

- Promark 120 GPS data is downloaded to a suitable folder on the desktop or laptop computer. OS Net Rinex data for the survey start / finish period is download from <u>www.ordnancesurvey.co.uk/gps/os-net-rinex-data/</u>
- GPS Promark and OS Net data is processed, and the corrected data exported as a .dxf file.
- The dxf file is then opened in GPS Utility and appropriate GPS locations are linked with lines to visually highlight individual archaeological features. The processed data is exported in a variety of formats including: gpx, kml, jpg, tiff etc.

1.2.4 British National Grid (BNG) Map Coordinates

The maps co-ordinates are OSGB 1936 British National Grid also known as EPSG:27700 (See http://spatialreference.org/ref/epsg/27700/). They are generally displayed as 6 figure co-ordinates for eastings and northings, which may appear unfamiliar. For example, the image below of the centre of Gunnerside shows the co-ordinates of Gunnerside Bridge (Red arrow). At the bottom of the image the GIS openstreetmap.org map co-ordinates are displayed to 8 digits by the GIS software, and underneath they have been rounded to 6 digits. The first digit of the Easting and Northing which is 3 and 4 respectively, can be replace with the Ordinance Survey alpha equivalent for this location which is SD. So, the 6 digit 395105 498201 coordinate reference is the same as SD 95105 98201. Each BNG reference in

Ordnance Survey celebrated its bicentenary

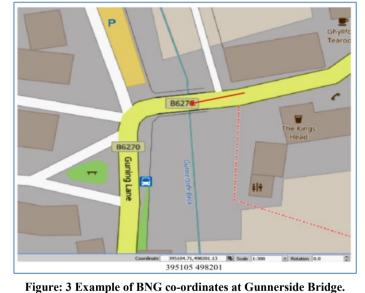
unveiled this plaque on 25 October 1991

The Newlyn Tidal Observatory

in 1991 and to mark this anniversary, Director General, Peter McMaster, CB,

by Ordnance Survey from 1915-1983

and houses the Datum from which all heights above mean sea level are based





format defines one square metre, hence two or three decimal places are required to define locations in cm or mm. A full explanation can be read at Wikipedia (Wikipedia.org) just search for Ordnance Survey British National Grid. Altitudes quoted are all Above Ordinance Datum (AOD). The Datum used by the Ordnance Survey is in Newlyn and was established by measuring the tidal height every 15 minutes between 1915 and

1921. A brass bolt head marks that mean sea level height in Newlyn harbour in Cornwall.

Chapter 2: The nature of the evidence and scope of the Survey



Figure: 4 The survey in progress. Coaxial Field Boundary crosses the track from Blades to Winterings [F7].

2.1 Introduction

The aim of this survey has been to provide the first comprehensive account of visible historic features of this fine Swaledale upland landscape. The archaeological features recorded during this survey are restricted to the upper slopes and are within open rough pasture on open access land.

The fragmentary remains of prehistoric field systems, burial cairns, ring cairns, burnt mounds, settlements and the numerous scattered lithic finds are a palimpsest of evidence for early post glacial human activity and occupation, on this most attractive area high above the river Swale.

From the mid-1600s the local farmers became part-time miners as the lead extraction industry developed. During the next 100 years they transitioned to become primarily miners and part-time farmers.

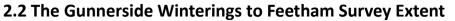
Ruined structures, remnants of the Miner-Farmer occupation have been photographed. Buildings in present day occupation and use, have not been photographed.

Except for the settlement at Great Rowleth, none of the early settlements which are known to exist within the lower enclosed pastures have been included.

The presence of nearby lead mine remains, quarries, ruined buildings large and small which are not in present use have been noted and photographed. The historic use and occupation of these interesting relicts of the Miner-Farmers is the task of the historian rather than the archaeologist.

The exact locations of the identified features are recorded to the nearest metre in each Gazetteer found in the penultimate section of the four principle chapters: 3, 4, 5 and 6. The last section in those four chapters includes selected full page map images.





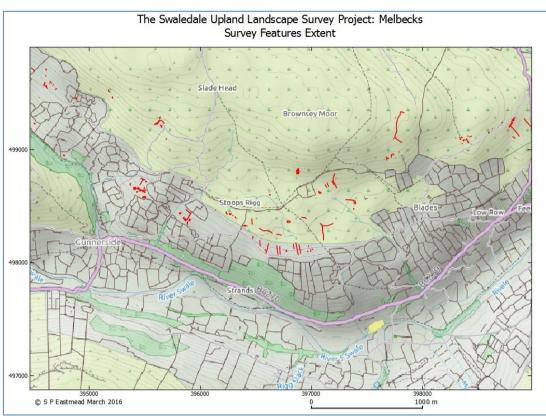


Figure: 5 The full area surveyed from Gunnerside Winterings to Feetham Pasture.

2.3 The Geological and Geomorphological background to the Survey Area.

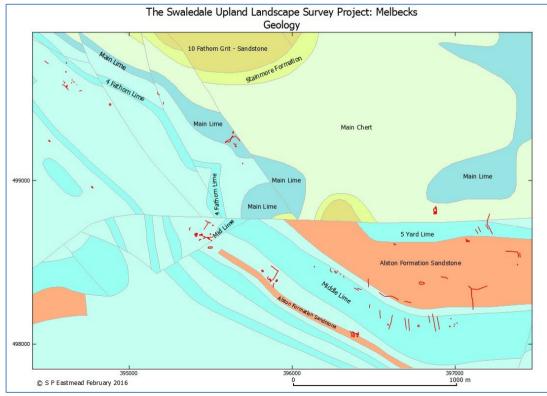


Figure: 6 Geological strata centred at Brownsey House. Data from British Geological Survey GBR BGS 1:50k Bedrock WMS GIS map 2016.

Chapter 2: The nature of the evidence and scope of the Survey

The geological strata and structural background to the whole of the survey area are shown on (Figures: 6, 7 and 8). The geological strata, land forms and the remaining mining infrastructure at selected localities will be further described within each of the four survey chapters detailed in **2.6.2 Survey Format**.

2.4 The Stockdale Fault and its influence on the landscape structure of Brownsey Moor.

The Stockdale Fault is a profound fracture in the earth's crust and is one of the boundary faults which defines the southern edge of the Stainmore Trough. This fault brings chert strata of Namurian Age to outcrop against the Five Yard Limestone.

Figures: 6, 7 and 8 illustrate details of disturbance of strata on the line of the Stockdale Fault which runs roughly from West to East close to Brownsey House. The details are based upon K.C. Dunham and A.A. Wilson, 1985 with advice from John Russell.

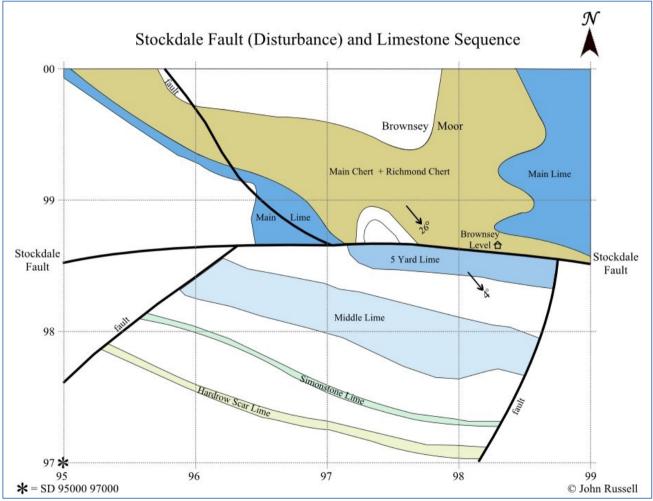
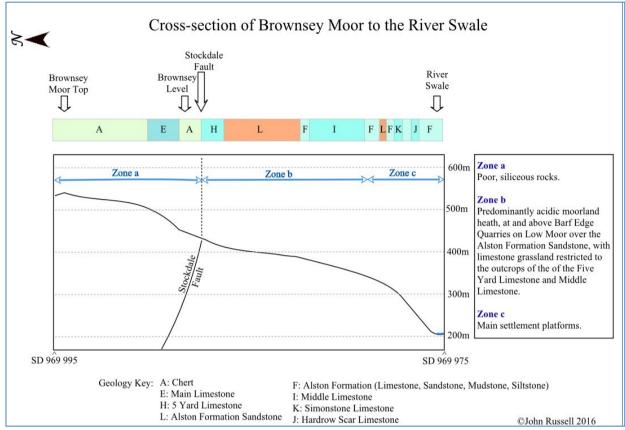


Figure: 7 Plan at Brownsey Moor. Detail of strata on the Stockdale Fault. (Plan © John Russell).



Chapter 2: The nature of the evidence and scope of the Survey

Figure: 8 Sectional view at Brownsey Level. © J Russell. Note the three zones a, b & c.

2.5 Earlier Settlement Surveys

A selected number of the settlements located within the enclosed pastures east of Gunnerside and those east of Feetham were surveyed by Tim Laurie many years ago, at large scale using the traditional plane table method. The plane table survey of the enclosed platform settlement at Great Rowleth has been digitised by Stephen Eastmead and is included in Chapter 5 (Figure: 109).

2.6 Survey Methodology

2.6.1 Survey Period

The survey area was covered in several sections between November 2015 and March 2016.

Chapter 3 [W2–1 to W2–14] surveyed on 11.02.2016

Chapter 3 [GS1 to GS12] surveyed on 18.02.2016

Chapter 4 [GS13 to GS22] surveyed on 18.02.2016

Chapter 4 [W1 to W33] surveyed on 20.01.2016

Chapter 5 [F1 to F28] surveyed on 14.11.2015

Chapter 5 [F29 to F48] surveyed on 16.01.2016

Chapter 6 [FP1–FP32] surveyed on 03.03.2016

2.6.2 Survey Format

The survey area was divided into four sections. The report for each section (west to east) is contained in Chapters: 3, 4, 5 and 6 as follows:

Chapter 3: From Winterings above Gunnerside Gill to the unfenced road above Bents. Chapter 4: From The unfenced road at Bents, across Lodge Green to Heights.

Chapter 2: The nature of the evidence and scope of the Survey

Chapter 5: Low Row Pasture and adjacent areas Chapter 6: Feetham Pasture and adjacent areas.

Each of the four chapters contains in the penultimate section of the chapter a gazetteer which includes the full British National Grid co-ordinates of each feature. Selected figures are shown in greater detail as a full page image after each of the four gazetteers. This also includes an Ordnance Survey 1:10,000 map of each of the four survey areas, which will help to identify the place names mentioned in the text.

2.6.3 Descriptive Notes

Where applicable, descriptive notes under the following heads will be provided within each of the archaeological report chapters 3–6:

- Geology, vegetation, aspect
- The contemporary prehistoric environment
- The archaeological remains
- Affinities of the lithic finds
- Affinities of the Bronze Age remains
- Affinities of the coaxial field systems
- Unoccupied and ruined farm buildings
- Gazetteer of archaeological features

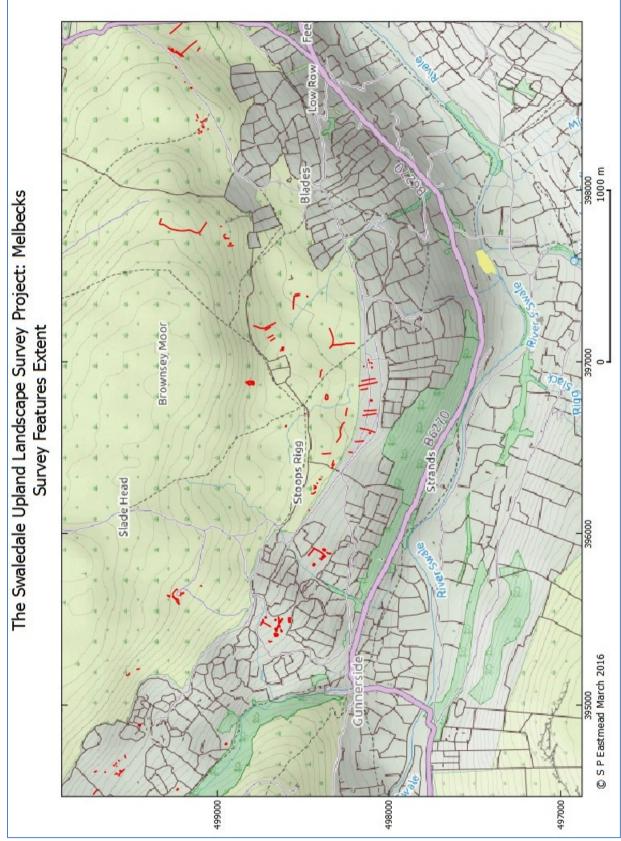
2.6.4 The Gazetteers of Archaeological Features

The categorization of those feature is described below. For the location of each feature see the respective chapters. The area surveyed comprises the high, generally south or westerly facing slopes of Swaledale eastward from Winterings within Gunnerside Gill to Bents and Barf End.

- **Small Cairn or clearance heap:** Stone cairn not exceeding 4m in diameter in any one dimension. Overall dimensions stated.
- Medium Cairn or clearance heap: Cairn exceeding 4m but not exceeding 6m in any one dimension. Overall dimensions stated.
- Large Cairn or clearance heap: Cairn exceeding 6m in diameter in any one dimension. Overall dimensions stated.
- **Ring Cairn:** Stone dump embanked circular enclosure, otherwise described as enclosed cremation cemeteries of Late Neolithic or Earlier Bronze Age Date. Ring cairns are not scooped and could be confused with possible roundhouse or stock enclosure.
- Note: Cairns of any dimensions marked with an asterisk (*) are significant and may contain burials as indicated by being either: false crested, or aligned at viewpoints, kerbed or otherwise constructed with care.
- **Coaxial field boundary:** Stone field bank essentially on a shared common axis, dotted where intermittent. Isolated visible fragments should also be considered as further evidence when on this shared axis and otherwise entirely masked below heather or peat. Includes transverse boundaries between coaxials.
- **Field boundary:** Any stone field bank or other boundary which is not coaxial. Lateral field dividing banks and terminal field banks are so described. Field banks which are intermittent owing to stone robbing, absent from visible quarrying or obscured below encroaching peat are shown dotted.
- Enclosure: Stone banked enclosures with or without associated habitation sites.
- Wood Bank: Stone banked enclosure which is encloses a steep and rocky slope to protect a previous woodland copse and which is unlikely to have been used as a stock enclosure.

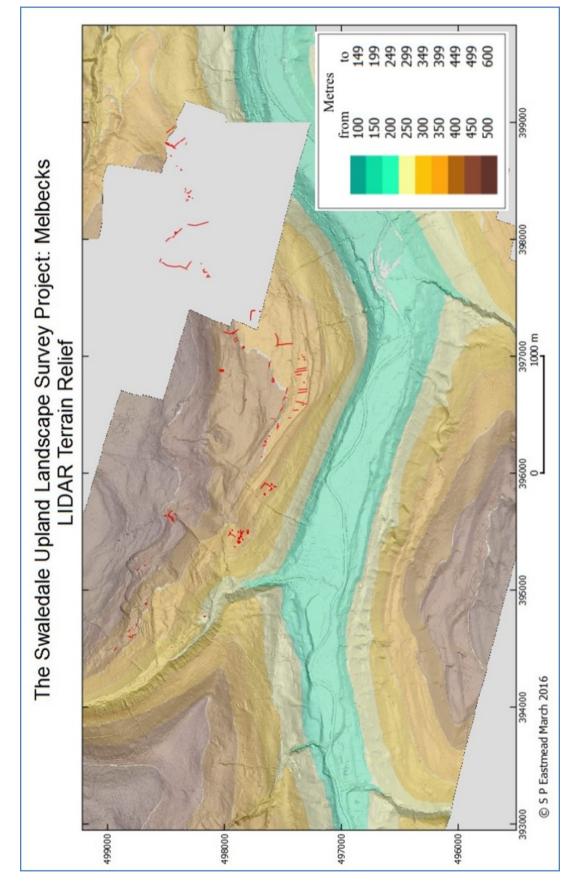
2.6.5 Figure and Feature Numbers

References to Figures are enclosed in () brackets and references to archaeological features in [] brackets.



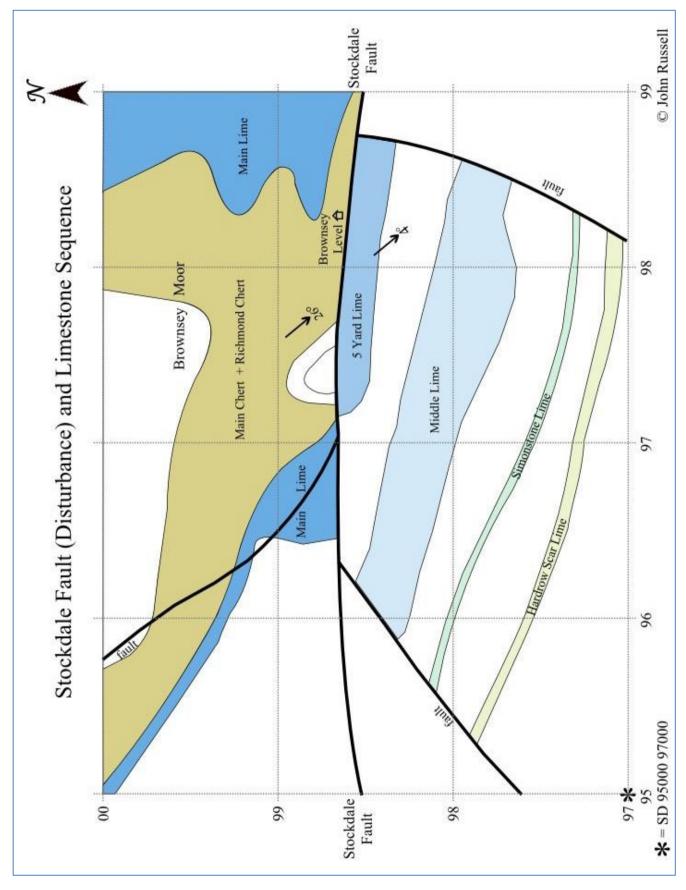
2.7 Survey Extent Full Page Feature Maps

Figure: 9 Terrain Relief Map showing Survey Extent.



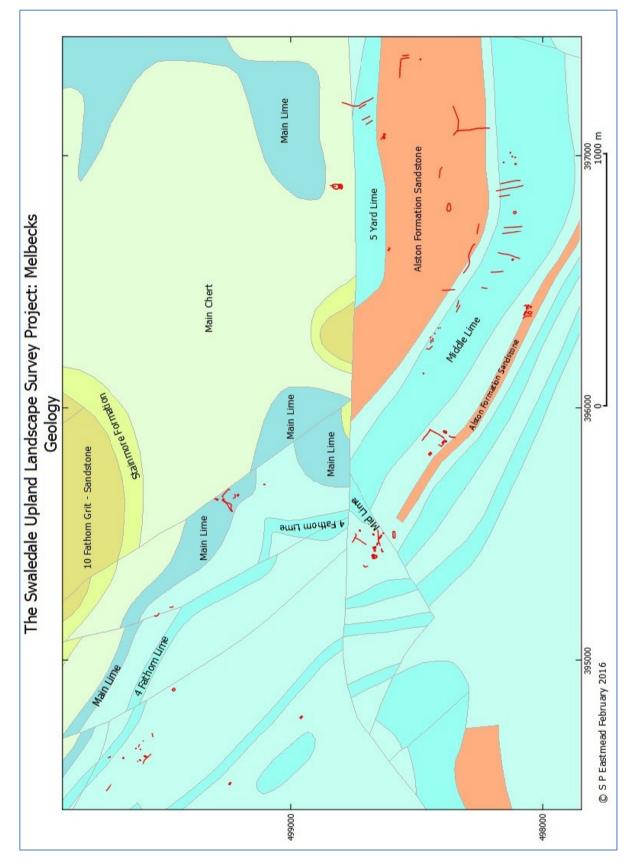
Chapter 2: The nature of the evidence and scope of the Survey

Figure: 10 Lidar Terrain Relief showing Survey Extent.



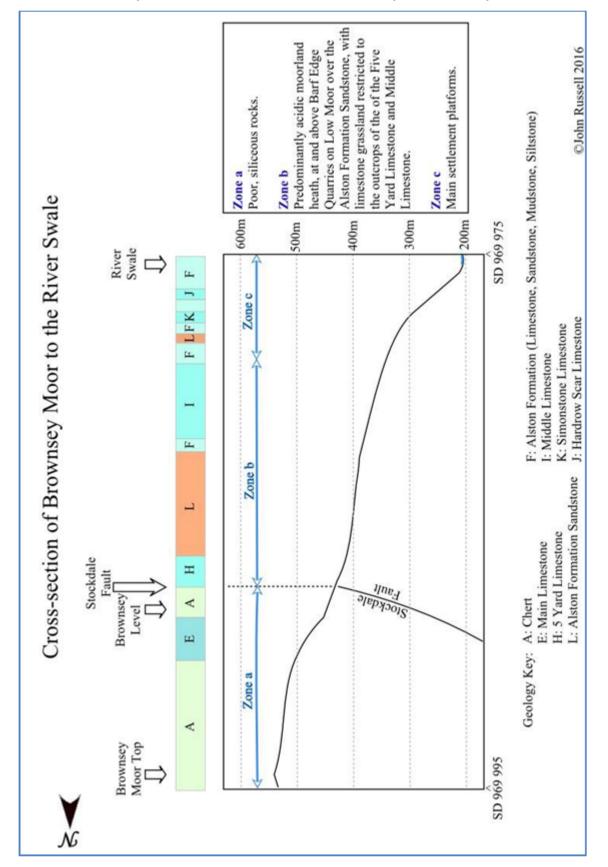
Chapter 2: The nature of the evidence and scope of the Survey

Figure: 11 Stockdale Fault at Brownsey North of Barf.



Chapter 2: The nature of the evidence and scope of the Survey

Figure: 12 Survey Extent Geology.



Chapter 2: The nature of the evidence and scope of the Survey

Figure: 13 Cross-section of the Stockdale fault from Brownsey Moor to the River Swale.



Figure: 14 Winterings. An early Miner-Farmer Farmstead and winter pasture.

3.1 The Area Surveyed

The area surveyed in Chapter 3 commences at Winterings Pasture on the upper eastern slopes of Gunnerside Gill and extends further upslope to include the High and Low Scars above Winterings. The early lead bale sites on Winterings Edge are noted and the substantial remains of the Kinning Lead Mine are included. The survey area terminates at the unfenced road above Gunnerside to Barf End.

3.2 Site Recognition and Earlier Records

So far as we are aware, very few published archaeological records of this area exist. In contrast, the mining remains, vernacular buildings and the historical record of the Miner-Farmer landscape have been the subject of considerable research.

In their introduction to the Prehistoric and Roman Settlement of Swaledale, R. Fieldhouse and B. Jennings, 1978 A History of Richmond & Swaledale, Phillimore, concluded that: 'Very little archaeological research has been undertaken in Swaledale and therefore little can be said about the pre-history of the area.'

In support of this view, they cited the limestone terrace below High Scar above Winterings (SD 953 995, 500m AOD) as being 'devoid of archaeological evidence' despite being 'a typical Pennine prehistoric site which would almost certainly have been occupied during prehistory in a more populous area.' This is to say that a similar area at similar elevation, elsewhere in the Limestone Dales would almost certainly have been the location of early hut circles and enclosures.

Fieldhouse and Jennings were not accurate in citing the 'terrace' below High Scar as typical of those with Pennine Prehistoric Settlement. The 'terrace' at 500m elevation is the upper edge of the vast rock slide which originates at and reveals the sheer limestone cliff at High Scar, (Figure: 18) below. Thus, being hummocky and rock strewn this 'terrace' is not typical of Pennine prehistoric settlement.

Furthermore, despite being high and fully exposed, this 'terrace' is not entirely devoid of evidence for human pastoral activity. It has at least one enclosure with probable roundhouses (Feature [GS4]) see Figures: 21, 22 and 23.

3.3 Geology and Geomorphology

The Winterings Survey Area comprises the steep south westerly facing slopes and uppermost limestone scars on the eastern side of Gunnerside Gill, 2.5 km north of the confluence of Gunnerside Beck with the River Swale. The lower Winterings slopes above Gunnerside Beck are comprised of limestone and shale strata of the Middle Limestone Series masked below glacial till and superficial landslip debris within a deep, steep sided narrow valley. The immense landslips which originate on the western brae of Gunnerside Beck can be clearly seen on the Lidar Image (Centre-Left on Figure: 15, 38 & 42). This landslide terminates at the steep sided ravine cut by Gunnerside Beck through Namurian strata and superficial deposits.

Winterings Low Scar and The High Scar are west facing, sheer cliffs formed by the outcrop of the Underset and Main Limestones respectively. Extensive frost shattered scree slopes have formed below these cliffs, (Figures: 16, 17, 18 & 22).

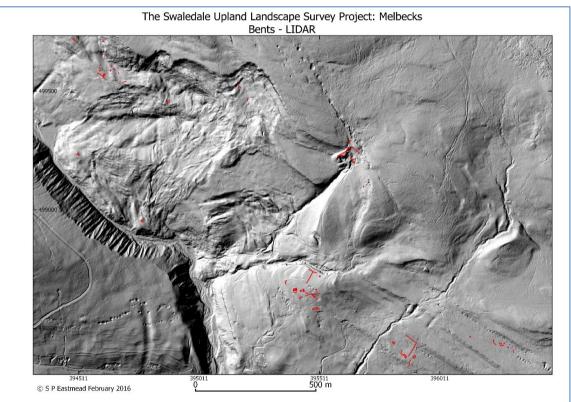


Figure: 15 LIDAR image of: Winterings, Bents, Lodge Green and Heights with overlay in red of archaeological features.

Below these screes, the daleside can be seen to have been formed from superficial drift and landslip deposits. The spoil heaps of the Kinning Lead Mines are visible at the eastern end of High Scar, slightly above and to the right of the centre of the image.

The vast landslips originate at and exposes the fine vertical south westerly facing limestone cliffs above Winterings, at High and Low Scars. The front of this late glacial solifluction lobe, or more explicitly, vast rock slide, terminates far below, just above stream level. Because of the highly disturbed, rocky and difficult surface of this landslip, Winterings was probably always marginal to human activity. Perhaps this very marginality rendered the slightly more favourable pastures at Bents the only ground available to the mythical immigrant 10C Norse Settlers lead by Gunnar.

3.4 Vegetation, Aspect

In response to the geology, the vegetation of the eastern side of Gunnerside Gill at Winterings both that of today and that during prehistory, can be assigned to two regions:

3.4.1 The Lower Region. Winterings Pastures

The Lower Region (Figure: 14) comprises the stream cut ravine of Gunnerside Beck and the complex of small irregular walled fields of Winterings Pasture on the steep rock-strewn slopes of the eastern side of



Figure: 16 Winterings Low Scar. Faulted strata. The Underset Limestone.

Gunnerside Gill. Here, by dint of incredible human labour through time, rocks have been cleared to form small paddock-like walled fields.

3.4.2 The Upper Region. Winterings Edge: The High and Low Scars

The Upper Region comprises the rocky kame terraces, high screes and talus slopes below Winterings Edge. The High and Low Scars are sheer limestone scarps formed from the Underset and Main Limestone (Figures: 16–18 & 21–23).



Figure: 17 Isolated ash tree at base of scree below the Lower Scars. The last survivor of woodland here!



Figure: 18 The approach to High Scar.

3.5 The contemporary prehistoric environment at Winterings

There are no local pollen diagrams available from Gunnerside or Melbecks CP area for direct evidence of past environments. Accordingly, the probable prehistoric and early historic environment at Gunnerside Gill can reasonably be inferred from the composition and disposition of fragmentary native woodlands which survive in Gunnerside Gill and elsewhere throughout Swaledale, upstream of Richmond today.

Throughout later prehistory, calcareous soils derived from glacial drift, from solifluction and from rock slides on the dale slopes, supported a species rich limestone ashwood community. Ash, wych elm, alder, yew, hazel, bird cherry and juniper were dominant. Aspen, field maple, hawthorn, blackthorn, bird cherry and sallows were present.

Where soils derived from sandstone and chert exist, as on the steep western side of Gunnerside Beck; stunted upland birch woodland was present. In the then un-cleared or drained flood plains of the Swale and Gunnerside Beck, were dense impassable alder carr. On the high plateau above Winterings Edge, base poor soils derived from Namurian chert, sandstone and mudstones supported a species poor woodland of stunted downy birch and pedunculate oak. The remains of this prehistoric woodland can be seen at the base of deep blanket peat above 500m AOD today.

Pollen reports relevant to the past vegetational environments of Swaledale are available, as follows: 1. Honeyman 1985 (unpublished). 'Studies in the Holocene vegetation of Wensleydale', Ph D Thesis, University of Leeds.

Livett (Unpublished) but detailed within Fleming, 1998, p.138. Ellerton Moor, NGR SE058984, 360m.
 Swaledale Ancient Land Boundaries Project (SWALB), Interim Reports 1–10, 1985–1994). This pollen report was obtained from 4m deep peat-infilled glacial overflow channel close to the Grinton Leyburn Road.

Reference: Laurie T. C. 2004. 'Springs, Woods and Transhumance: Reconstructing a Pennine Landscape during Prehistory.' Landscapes, 2004. Vol. 5 No 1, pp 73–102.

3.6 Winterings Pasture and the High and Low Scars recorded archaeological evidence

Contrary to the reasonable assertion made by **Fieldhouse and Jennings, 1978, op. cit**. in their chapter on Prehistory, that 'this high terrace, unlike so many similar high Pennine Terraces, appears to be devoid of traces of human settlement.' This survey has recorded a settlement enclosure at the base of the screes shown on (Figures: 22 & 23).

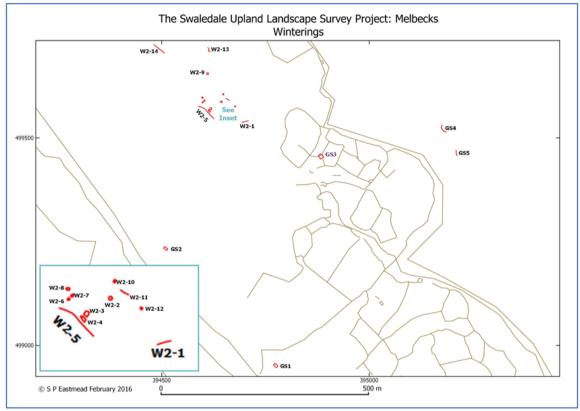


Figure: 19 Winterings Pasture. Features recorded.

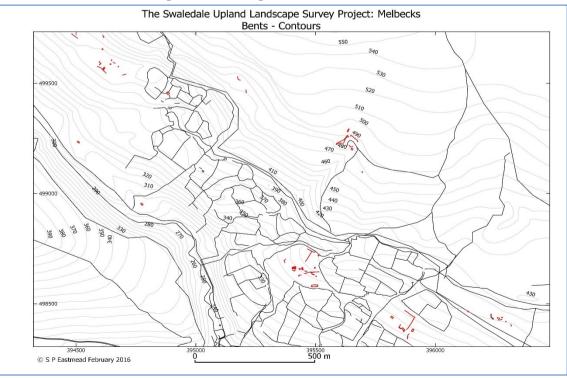


Figure: 20 Western part of the survey area: Winterings

3.7 The Archaeological Remains

3.7.1 Lithic finds and scatters.

Unusually, no lithic finds of any period were recorded from Winterings Pastures or from High and Low Scars



s or from High and Low Scar during this survey.

The absence of finds reflects the original inhospitable character of this steep rocky and wooded slope. Few springs at viewpoints favourable to Mesolithic hunter period camp sites exist.

3.7.2 Early Settlement

Early settlement remains which underlie and predate the present stone walled enclosures, are restricted and confined to the few kame terraces amenable to cultivation below Winterings

Figure: 21 Winterings Pasture. Bronze Age Cairnfield settlement. Disturbed cairn remnants [W5, W6] under survey.

Edge. Again, this reflects the generally inhospitable marginal landscape here (Figure: 23).

Post-medieval land hungry Miner-Farmers cleared the rock-strewn slopes at Winterings, to form their farmsteads and small, dry-stone walled irregular fields.



Figure: 22 Winterings High Scar and screes. [GS4] Stone embanked enclosure with probable roundhouse.

3.7.3 Bronze Age Cairnfield type settlement at Winterings Pasture.

Small upland pastoral cairnfield settlement complex of Mid Bronze Age character at Winterings Pasture (Figure: 21) comprising fragmentary short lengths of stone dump field banks, [W1, W3, W4, W7 & W8] and several stone cairns [W2, W5 & W6] which may either be burial or field clearance cairns. Most of the cairns are small, less than 4m in any one dimension. [W5] and [W6] are the two sections of a relatively large cairn which has been cut in two by a recent trackway.

The short lengths of field bank seen and recorded during the field survey represent only part of the original extent of these fields. The original extent of the slight remains of the early fields can be seen from the higher elevations on the slopes at Low Scar above Winterings.

No roundhouses were identified which could be associated with the stone cairns and fields. However, a group of four probable house platforms overlain by a recent stone field wall have been provisionally identified from



Figure: 23 Small enclosure at lower edge of scree below High Scar under survey. The outline of a level stance

photographs taken of Winterings Ruined Farmstead from the west (Figure: 24). Several further definite hut circles have been identified, also from photographs, in the screes below Low Scar. These additional hut circles have not yet been surveyed.

3.7.4 Burnt Mounds.

No burnt mounds were recorded in Winterings survey area, perhaps representing the absence of constant springs.

3.7.5 Later settlements and field systems.

Except for the small enclosure [GS4] below High Scar, no settlements characteristic of the Iron Age, Roman or of Post Roman and Medieval periods, which predate the walled pastures of the Miner-Farmer homesteads, were recorded.

Several possible cleared areas were considered during the survey as possible hut circle sites, both within this small stock enclosure and on the scree slope above. None was considered sufficiently well-defined to justify recording. However, photographs reveal that these features may well prove to be the stances for hut circles which have subsequently been concealed beneath later scree deposits. The presence of hut circles within and above this small enclosure was considered very probable.

Small hut circle settlements like that described, were occupied seasonally by transhumant pastoralist family groups visiting the high limestone pastures during the summer months.

3.7.6 Deserted and ruined Farm Buildings

Ruined farm buildings are perhaps the most interesting elements within the landscape at Winterings. Selected examples seen during the survey have been noted within the text. However, their history will not be detailed as being the province of the historian and beyond the scope of this survey. Please refer to the Gazetteers and photo file for further details of the evocative remnants of abandoned, ruined farms, barns and cow byers which are such a feature of the landscapes at Winterings.



Figure: 24 Ruined farmstead near Hugill House

Figure: 25 Ruined Barn and Cow Byer in lower pastures close to Gunnerside Beck

3.7.7 Lime kilns and associated structures.

This much-admired lime kiln with its well-preserved loading roadway is surely one of the finest and wellconstructed lime kilns to be seen anywhere in the Dales. Several further lime kilns were photographed during this survey. Lime kiln below Low Scar, Winterings Pasture. [W13] (Figures: 26, 27 & 28).



Figure: 26 Winterings Pasture (W9). Small stone slated building near the lime kiln.



Figure: 27 lime kiln at Winterings Pasture and access roadway above for loading the kiln [W13]

Figure: 28 the access road to the top of the lime kiln.

3.7.8 Mining Remains.

Lead mining remains, notably lead bales (early lead smelting sites) and the Kinning Lead Mine are a significant element in the historic landscape of the Survey Area.

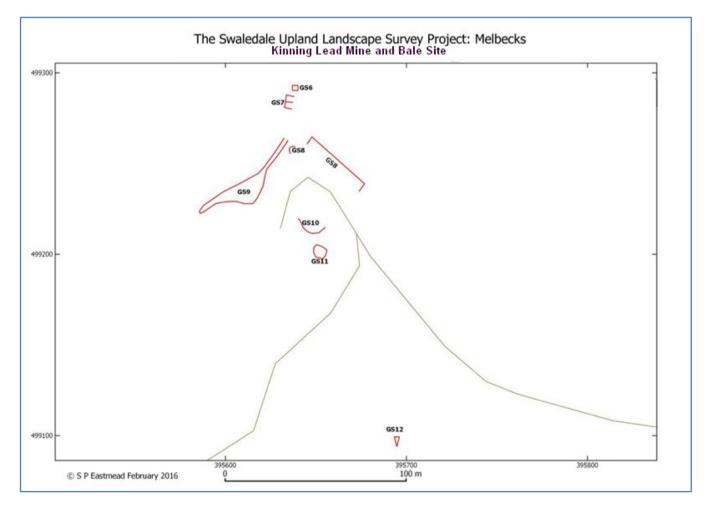


Figure: 29 The Kinning Mine and Bale Site.

3.7.9 The Kinning Lead Mine

Most prominent of the more recent mining remains are the very extensive remains associated with the Kinning Mine [GS6–11]. The photographs which follow provide a visual record of these remains see (Figures: 30-37).



Figure: 30 The extensive spoil heaps of the Kinning Mine [GS9]



Figure: 31 The extensive spoil heaps of the Kinning Mine [GS9]

The Geological Memoir expressed the opinion that not much ore was recovered. However, the volume and extent of the waste from dressing and processing operations and the number of bouse team bunds indicate that they expected it to be a rich mine. However, Mike Gill in his book: **Gill M, 2004, Swaledale - its Mines and Smelt Mills, Landmark**, states: "It (Kinning Level) was started in the early 1840s and followed Kinning Vein north-west in the Main Limestone to its junction with the Barbara Vein, which it reached in 1855.... But was never a large producer of ore and only 6 men worked there in 1862". Having said that Gill also lists a table of tons of lead ore mined in 1857 listing: Barrass 21.6, Hard Level 571.9, Forefield 123.3, Bunting 518.9 and Kinning 992.5, so it did have some success in the early years as the size of the tips suggests.



Figure: 32 Entrance to the Kinning Mine Level [GS6] with small stone bunds [GS7] and tramway to the level spoil heap.

The reader is referred to The British Geological Survey Maps and Memoir for details of the Kinning Mine and of the complex geological structures, strata and lead mining of North Swaledale.

Sites described in the text are representative of the much larger number recognised and recorded during the survey. For full details of all sites recorded Chapter 3.8; the gazetteer.



Figure: 33 The entrance to the Kinning Mine Level [GS6]. The tunnel entrance has collapsed. further in.



Figure: 34 Calcite is the most prominent mineral on the spoil heaps.



Figure: 35 View across the dressing floor, pond and dam to the very extensive waste tips



Figure: 36 Old mine shaft. Evidence for earlier mining here.

3.7.10 Lead Bales

The series of early lead bale smelting sites at the top edge of High Scar at Winterings were among the first to be described in mining literature. The lead bale seen in (Figure: 37) is the larger of two previously unrecorded lead bales which were recorded during this survey.

The other previously unrecorded site (see Chapter 6 feature [FP11]) is an isolated small lead bale recorded above Staney Gill Hole.

1. Raistrick, A. 1927. One of these lead bales, at BNG SD 95349 99500 has been radiocarbon dated to 1280AD.

2. Richard Smith, 2006. Radiocarbon dating of early lead smelting sites. Memoirs 2006. British Mining N0 80. Northern Mine Research Society Memoirs.



Figure: 37 [GS12]. Large bale on the steep slope to the SE of the Kinning Mine.

3.8 Winterings Gazetteer of Archaeological Features.

Cairns of any dimensions marked with an asterisk* are significant and may contain burials. These cairns are false crested or aligned at viewpoints, kerbed or otherwise constructed with care.

[Feature	BNG Reference	Altitude (m)	Description
Reference]			
W2-1	SD 95408 98666	367	Winterings. Cairnfield. Short length of field bank
W2-2	SD 95408 98666	367	Winterings. Cairnfield. Small cairn, 3m diameter. Undisturbed.
W2-3	SD 95417 98667	369	Winterings. Cairnfield. Eastern section of an elongated stone feature or large
			sub-circular cairn cut in two by later trackway.
W2-4	SD 95409 98657	365	Winterings. Cairnfield. Western section of an elongated stone feature or large
			sub-circular cairn cut in two by later track way.
W2-5	SD 95447 98662	374	Winterings. Cairnfield. Field bank next trackway.
W2-6	SD 95444 98666	375	Winterings. Cairnfield. Small Cairn 3m diameter.
W2-7	SD 95444 98660	372	Winterings. The Cairnfield. Small Cairn 3m diameter.
W2-8	SD 95441 98664	371	Winterings. The Cairnfield. Small Cairn 3m diameter.
W2-9	SD 95447 98657	373	Winterings Pasture. Small isolated stone slate roofed hut once associated
			with the adjacent lime kiln.
W2-10	SD 95433 98661	370	Winterings. Cairnfield. Small Cairn 3m diameter. Near spring.
W2-11	SD 95455 98652	372	Winterings. Cairnfield. Field clearance bank.
W2-12	SD 95462 98650	374	Winterings. Cairnfield. Small Cairn 3m diameter.
W2-13	SD 95481 98641	374	Lime kiln and walled trackway to the top of the kiln for loading purposes.
W2-14	SD 95484 98642	374	Remnant of dry stone field wall.
GS1	SD 94773 98955	296	Small cow byer, ruin in pasture on N side of Gunnerside Beck.
GS2	SD 94509 99237	320	Hay Barn and cow byer on N side of Gunnerside Beck.
GS3	SD 94884 99455		The Winterings Ling-thatched Farm.
GS4	SD 95175 99524	480	Curvilinear stone banked enclosure at base of scree west end of High Scar.
GS5	SD 95210 99465	473	Large bank of rocks probably natural.
GS6	SD 95639 99294	497	The Kinning Mine Level entrance.
GS7	SD 95633 99286	496	Open fronted structure adjacent to the level entrance.
GS8	SD 95634 99262	491	Bouse teams.
GS9	SD 95610 99237	486	Top of spoil heaps.
GS10	SD 95645 99215	484	Wall of settling dam below dressing floor.
GS11	SD 95651 99204	481	Settling pond.
GS12	SD95694 99096	476	Large bale on the steep slope to the SE of the Kinning Mine
Additional	SD 95349 99500		Winterings High Scar. Bale site, one of six located on the edge of Winterings
Record			High Scar. Radiocarbon dated to1280AD (Smith R. British Mining N080, p102.

3.9 Winterings Pasture Full Page Feature Maps

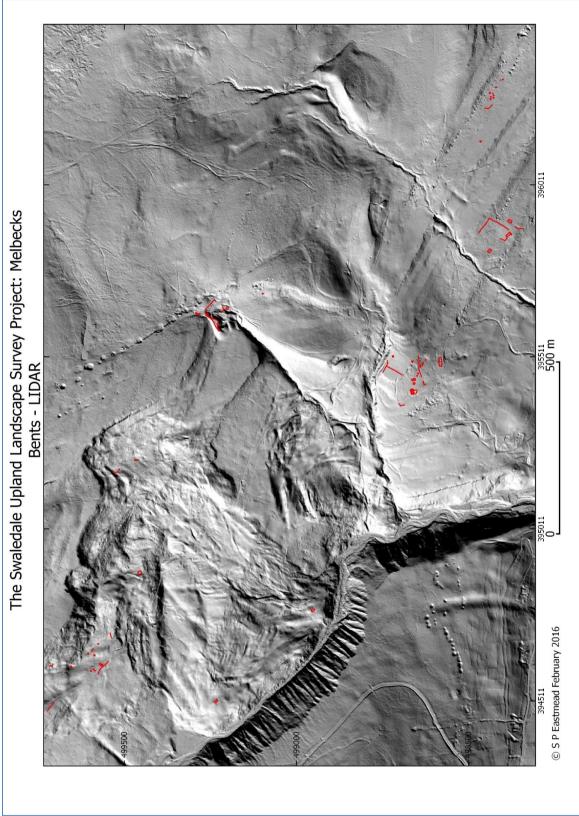


Figure:38 Lidar Image Western Extent of Survey Area

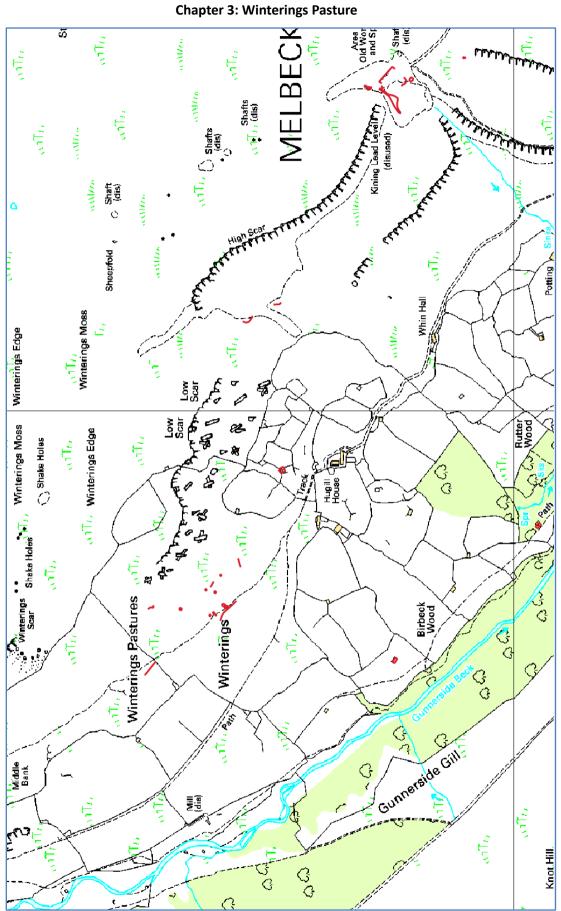
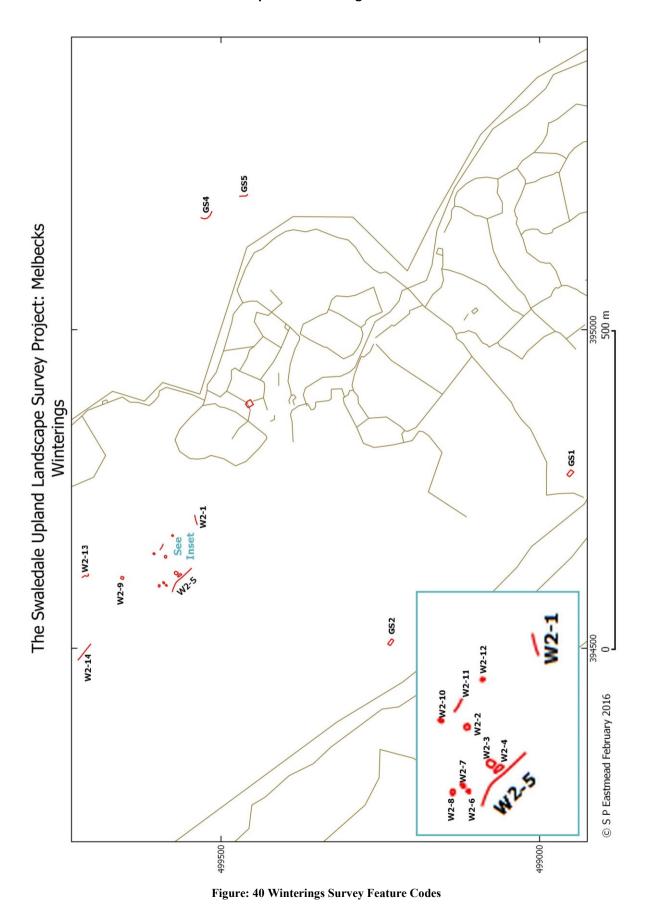


Figure: 39 Winterings (Chapter 3) Survey Extent.



Chapter 3: Winterings Pasture

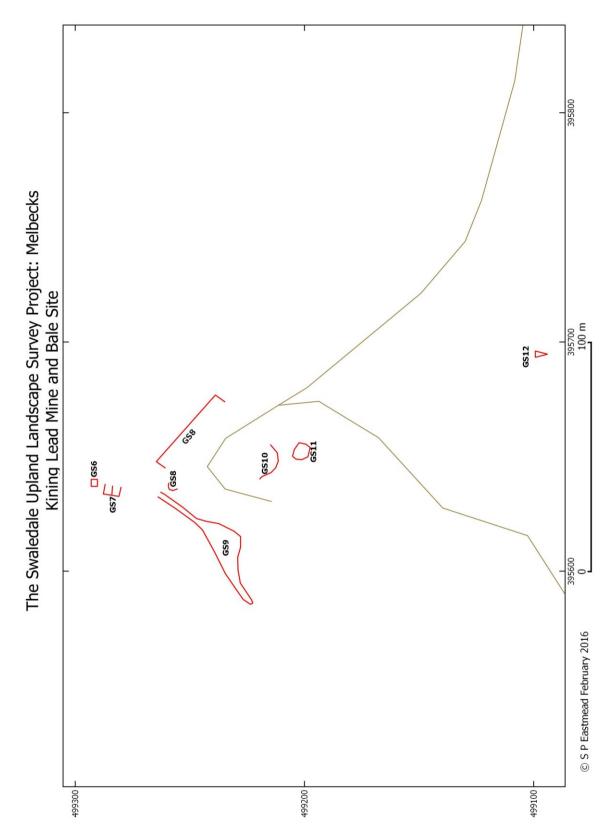


Figure: 41 Kining Lead Mine and Bale Site

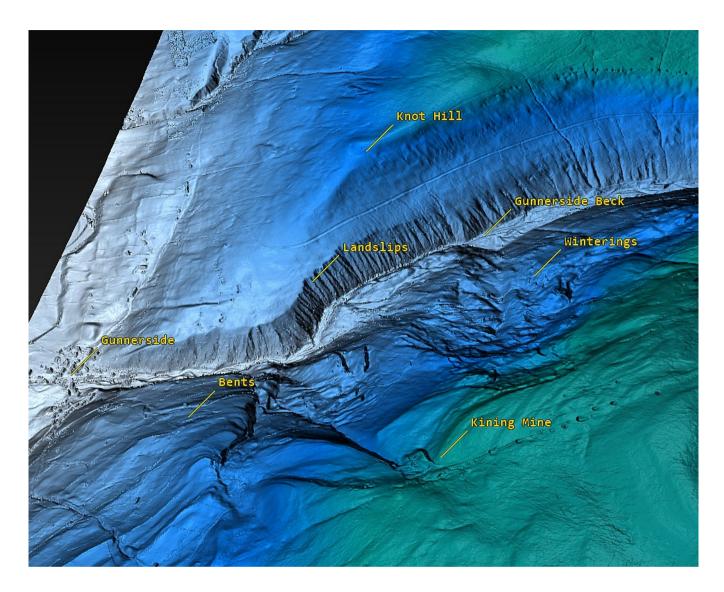


Figure: 42 Lidar view of the Winterings

Chapter 4: Bents, Lodge Green and Heights

4.1 The Area Surveyed

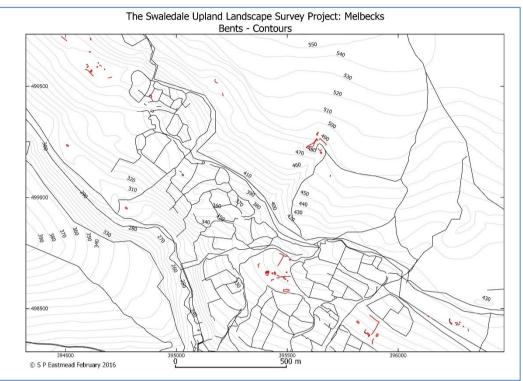


Figure: 43 Bents, Lodge Green and Heights, all features.

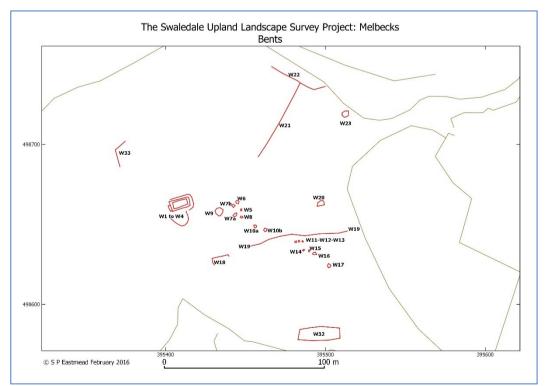
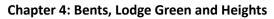


Figure: 44 Bents. Western Part. Settlement Remains at Bents. All features.



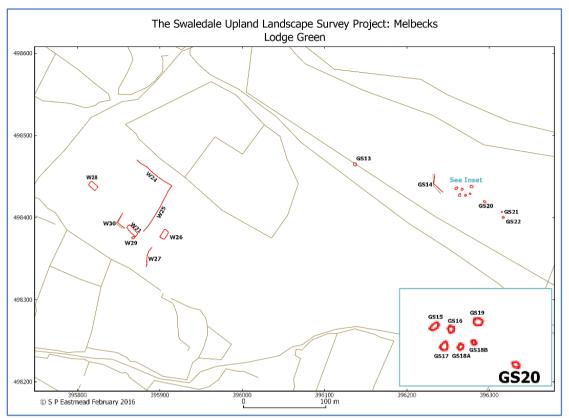


Figure: 45 Lodge Green. Linear settlement East. Inset: Cairnfield GS20 in pasture above Sleights.

This area comprises the rough open pastures of Bents, Lodge Green and Heights, east of the unfenced road above Gunnerside, and the area covered under Chapter 3. This part of the Melbecks Survey commences at the unfenced road above Bents that leads to Barf End.

4.2 Site Recognition and Earlier Records

So far as we are aware, very few published archaeological records of this area exist. The western and most prominent of the five rectangular structures at Bents, which are detailed below, had been recognised previously, and provisionally identified by these authors as Gunnar's Saetre[#].

In contrast, the mining remains, vernacular buildings and the historical record of the Miner-Farmer Landscape centred at Sleights have been the subject of considerable research.

#Sætre is a village in Norway; situated on the west side of the Oslofjord, about 45 kilometers south of Oslo. Its population was 3,195 (2006).

Reference: Fieldhouse and Jennings, 1978, op. cit.

Reference: Timothy Bagenal, 1999, Miners and Farmers. British Mining No 62. Monograph, Northern Mine Research Society.

4.3 Geology and Geomorphology

These steep pastures are associated with farms located on strata of the Middle Limestone Series at mid elevation on the northern slope of Swaledale 2.5 km north of the confluence of Gunnerside Beck with the River Swale.

The lower slopes, heavily wooded, fall steeply down to Gunnerside Bottoms, the wide level flood plain one of several early post glacial moraine dammed lakes in Swaledale.

Reference: Percy F. Kendall and Herbert E. Wroot, 1924, The Geology of Yorkshire, Private.

4.4 Vegetation and Aspect

The high pastures above the Miner-Farmer farms at Bents, Lodge Green and Heights are south facing with rough and occasionally steep calcareous grassland pastures. These pastures are located between the 300m and 400m contours on and below the Middle Limestone on the dale side above Rowleth Wood. The more productive pastures have been enclosed and improved as hay meadows within separate 'island' intakes; where each intake is allocated to one of the farms. For a fully detailed account of these farms, their occupants and their intakes refer to Timothy Bagenal, 1999, op. cit. The archaeological features described below are all located on open unenclosed pastures between the upper limit of the walled pastures and the isolated walled intakes.

4.5 Introductory Notes

Brief descriptions and photos of selected sites which have survived on open areas of steep pasture above the walled fields and island intakes of the farms at Bents, Lodge Green and Heights are provided here. Please refer to the attached Gazetteer for the localities and summary details of all feature localities recorded.

Archaeological remains recorded within this Area are slight and scattered.

Of over-riding interest, must be the open linear settlement of five rectangular structures of Late Viking, Early Medieval character, with associated field system recorded for the first time here on the 350m contour over some 600m eastward from Bents to Lodge Green. This linear settlement, located on marginal land high above the present village of Gunnerside, is interpreted as being the first homesteads of pioneering Norse pastoral migrant families seeking unoccupied land. Pending the confirmation that targeted excavations alone can provide, these five homesteads are identified here as the mythical Gunnar's Saetre, perhaps. Refer to (Figures: 44–52).

Other finds and sites of differing periods will be noted briefly in chronological sequence.

4.6 Lithic finds and scatters.

No finds of flint or chert have been recorded from this area to date.

4.7 Burnt Mounds

A single probable burnt mound has been identified at the top of Staney Gate lane. This spring rise site can only be confirmed by the visual presence of burnt stone and that is not yet confirmed.

4.8 Bronze Age

There is a small ring cairn, an isolated stone cairn and fragmentary field system at the scarp edge above Bents. [W20–23]. These slight remains are interpreted here as being of Bronze Age date. The ring cairn [W20] is a small but good example. This high pasture at Bents, with the remains of a field system is approached from below by a well-defined trackway which leads upward from the eastern section of Gunnar's Saetre. Thus, probably linking these upper fields with the rectangular structures of Gunnar's Saetre. The field banks, clearance remains and cairns both above and below the scarp are probably multi-period.

A group of small stone cairns with slight field banks have been recognised near a dry-stone walled sheep stell in the pasture above Heights, some 200m west of the wall that forms the boundary between Winterings (Chapter 3) and Bents (Chapter 4), are so characteristic of high-level Bronze Age settlements found everywhere in Northern Upland Britain [GS13–22] (Figure: 45).

4.9 Prehistoric Iron Age and Native Roman Settlement

No settlements of this period have been recorded to date from the upper slopes at Bents, Lodge Green and above Heights. It is to be expected that settlements of Romano-British age will be located at lower elevations in the enclosed pastures above the Swale Flood Plain. A well-defined early field system is visible on the steep slopes of the Lower Dale Side above Gunnerside.

4.10 Viking Age Settlement - unconfirmed

See Features [W1-31] (Figures 44–52)

Open spaced linear contouring settlement of five rectangular buildings, each of similar dimensions and each with entrances in the gable ends. These buildings can be regarded as representing a pioneering, marginal settlement of Pre-Conquest Norse character.

The buildings together with their associated field system and field clearance mounds, are the most significant discovery to be reported within this Survey. Together, they form a linear pioneering settlement located at the (then) upper margins of habitable land. On typological grounds the structures are tentatively assigned to the period of incoming Norse Settlements within Upper Swaledale. These rather short 'Long Houses' of probable



Figure: 46 Bents. Gunnar's Saetre perhaps. Rectangular building No 1 [W1] under survey.

Viking Age are located on the contour across approximately 700m within open pasture above Bents and above Lodge Green.

The linear settlement comprises of five rectangular house foundations [W1, W18, W26, W28 & W31] which are located on the 360m contour at intervals over 700m of open pasture above Bents and Lodge Green.

The most westerly of these structures with attached D shaped enclosure [W1–W4] and associated field clearance banks and cairns is located close to the unfenced road above Bents. This, the most prominent of the structures, had been recognised previously, **(Fieldhouse and Jennings 1978, op. cit.)** and identified by these author's as possibly Gunnar's Saetre.

Chapter 4: Bents, Lodge Green and Heights



Figure: 47 Closer view of rectangular building No 1 (W1) Photo: Ric Carter.

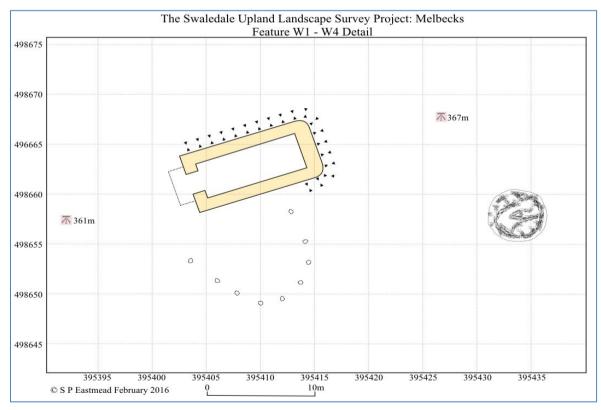


Figure: 48 Bents rectangular Structure [W1]. The attached D shaped stone banked stock enclosure and an adjacent stone cairn are indicated.

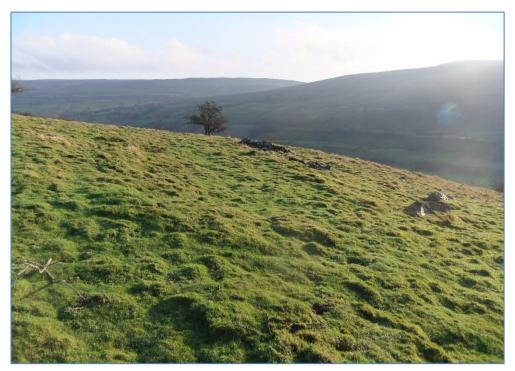


Figure: 49 Lodge Green. Outline of rectangular building No 4 [W28] under survey. Close to modern sheep stell and stone quarry.



Figure: 50 Lodge Green. Gunnar's Saetre. Rectangular building No 3 [W31] under survey. Note entrance in gable end.

The second structure [W18] is also located at Bents. The visible remains of this structure are very slight. Only the indistinct outline of this definite structure has survived the heavy quarrying for stone here. The outline only has been indicated on the survey.

Chapter 4: Bents, Lodge Green and Heights



Figure: 51 Lodge Green. House No 5 [W26]. The eastern most of five rectangular structures interpreted as Gunnar's Saetre.

The survey at Lodge Green (Figure: 45) recorded the further three rectangular buildings which together comprise this linear settlement of five rectangular structures and their associated fields. The fragmentary remains of a field system and one of two trackways associated with these rectangular buildings has been identified and recorded where visible on the scrub covered steep slope above the buildings. A second trackway leading upslope from the eastern part of the settlement at Lodge Green, has been recognised since the 2016 survey.

The survey plan at Bents, (Figures: 44 & 48), shows House 1 together with its attached 'D' shaped enclosure [W1–W4]. House 1 is the westernmost and most prominent of the five rectangular house structures which together form this settlement. The faint remains of the heavily quarried House 2 [W18] and part of a trackway



Figure: 52 Contouring field bank on hillside above rectangular structures.

leading up to the field system on the upper pasture are also on (Figure: 44). The fragmentary remains of a field system in the pasture above the scarp is also interpreted as associated with the rectangular houses.

The linear group of stone clearance heaps and cairns close to House 1 may simply represent clearance of the more level pasture up to the base of a steep rock-strewn slope at several periods. One or more of these cairns may contain burial remains.

House 1 together with its small abutting enclosure [W1–W4] are plainly visible being in open pasture at Bents close to the unfenced road from Gunnerside to Barf End. This building has, with some justification, been described as Gunnar's Saetre.

Rectangular structure [W1] (House 1) is not isolated but the westernmost of a total of five similar structures located on the 350M contour and extending eastward from Bents towards Lodge Green across 700m. See Survey plans above. The remaining three rectangular structures [W24–W33] are located at Lodge Green (Figures: 45, 49–52).

Each of the five rectangular structures are defined by thick roughly faced rubble foundation banks. Entrances to these simple dwellings are at the gable end-a characteristic of dwellings of early upland Norse Settlements elsewhere in Northern England.

This open linear settlement together with the remains of a contemporary field system is located on high pasture at Bents and Lodge Green. Each of the rectangular structures are closely conformable with the pioneering homesteads of the Norse settlers who moved from the Vale of Eden into Upper Swaledale. Norse Vikings first colonised the Western Isles of Scotland and then established their presence at Dublin and on the Isle of Man, before also settling on the Cumbrian Plain and in the Eden Valley.

These Norse farmers would have felt at home in Swaledale and of necessity established their homesteads on unoccupied marginal ground above a village ancestral to that now known as Gunnerside.

Rectangular structure [W22] is the outline of a stone built rectangular farmstead building which has been

demolished down to ground level. It is shown but not named on all large scale OS maps, and insignificantly marked on the current 1:25,000 map.

4.11 The Remains of the Miner-Farmer Communities.

The histories of each of the farmsteads located at Sleights has been described in detail and is available as a Monograph in the Northern Mines Research Association Series.

Images of the ruined and unoccupied remains of a selected number of these historic farms which were photographed during the survey are provided below.

References:

Fieldhouse and Jennings, 1978, op. cit. D. Coggins, 1986. Early Settlement in Upper Teesdale, County Durham, British Archaeological Reports. 150 (Oxford). Timothy Bagenal, 1999, op. cit.



Figure: 53 Bents. Remains of this substantial farmstead which has been reduced to ground level. It is shown but not named on all large scale OS maps, and insignificantly marked on the current 1:25,000 map.



Figure: 54 Bents. Remains of substantial Farmstead reduced to ground level. Not shown or named on the 1:25000 OS Map



Figure: 55 Heights. Miner-Farmer farms seen from Staneygate. Loaning House which remains occupied in foreground. John Dunn's House in distance and on Figure: 46 below.

Chapter 4: Bents, Lodge Green and Heights



Figure: 56 Barn below: small structure in corner of the field of unknown purpose.



Figure: 57 The ruins of John Dunn's House seen from Staneygate.



Figure: 58 small structure in corner of the field of unknown purpose.

4.12 Bents, Lodge Green and Heights Gazetteer of Archaeological Features.

Cairns of any dimensions marked with an asterisk* are significant and may contain burials. These cairns are false crested or aligned at viewpoints, kerbed or otherwise constructed with care.

[Feature Reference]	BNG Reference	Altitude (m)	Notes	Description
W1	SD 95408 98666	367	Gunnar's Saetre perhaps!	Bents. Rectangular House No 1.
			House number 1/5	External perimeter. Note entrance in the gable end.
W2	SD 95408 98666	367	Ditto	Bents. Rectangular House No 1. Internal perimeter.
W3	SD 95417 98667	369	Ditto	Bents. Rectangular House No 1.
				External storm water drainage gulley.
W4	SD 95409 98657	365	Ditto	Bents. Rectangular House No 1.
				Attached stock enclosure.
W5	SD 95447 98662	374	Undated field system and clearances	Bents. Small cairn or clearance heap
			associated with the rectangular	at base of slope.
			structures.	
W6	SD 95444 98666	375	Ditto as last	Bents. Small cairn or clearance heap.
W7a	SD 95444 98660	372	Ditto as last	Bents. Small cairn or clearance heap.
W7b	SD 95441 98664	371	Ditto as last	Bents. Small cairn or clearance heap.
W8	SD 95447 98657	373	Ditto as last	Bents. Small cairn or clearance heap.
W9	SD 95433 98661	370	Ditto as last	Bents. Small cairn or clearance heap.
W10a	SD 95455 98652	372	Together Cairns W10-17 form a	Bents. Small cairn or clearance heap.
			clearance edge to the pasture below.	
W10b	SD 95462 98650	374	Together Cairns W10-17 form a	Bents. Small cairn or clearance heap.
			clearance edge to the pasture below.	

[Feature	BNG Reference	Altitude	Notes	Description
Reference]		(m)		•
W11	SD 95481 98641	374	Together Cairns W10-17 form a clearance edge to the pasture below.	Bents. Small cairn or clearance heap.
W12	SD 95484 98642	374	Together Cairns W10-17 form a clearance edge to the pasture below.	Bents. Small cairn or clearance heap.
W13	SD 95486 98641	375	Together Cairns W10-17 form a clearance edge to the pasture below.	Bents. Small cairn or clearance heap.
W14	SD 95487 98637	373	Together Cairns W10-17 form a clearance edge to the pasture below.	Bents. Small cairn or clearance heap.
W15	SD 95490 98635	374	Together Cairns W10-17 form a clearance edge to the pasture below.	Bents. Small cairn or clearance heap.
W16	SD 95494 98635	374	Together Cairns W10-17 form a clearance edge to the pasture below.	Bents. Small cairn or clearance heap.
W17	SD 95502 98628	373	Together Cairns W10-17 form a clearance edge to the pasture below.	Bents. Small cairn or clearance heap.
W18	SD 95433 98632	366	Gunnar's Saetre perhaps! House number 2/5	Bents. Rectangular House No 2. Very slight but definite remains. 12m x 4m internally.
W19	SD 95479 98648	376	Gunnar's Saetre perhaps! Associated field system.	Bents. Track way leading to upper pasture.
W20	SD 95495 98666	383	Prehistoric. Possible ring cairn* with cremation burials.	Bents. Ring bank. Very small, 4.5m diameter overall. Quarried out at southern edge. At edge of slope.
W21	SD 95472 98718	383	Gunnar's Saetre perhaps! Associated field system.	Bents. Field bank. Survives well. Ston clearance bank below turf.
W22	SD 95483 98742	382	Ditto as last.	Bents. Field bank next road. At right angles to and marking northern limit of [B21]
W23	SD 95512 98723	387	Prehistoric. Burial cairn*.	Bents. Quarried medium size cairn next Road
W24	SD 95891 98457	372	Gunnar's Saetre perhaps! Associated field system.	Lodge Green. Field bank. Upper limit of a field system associated with the rectangular buildings below.
W25	SD 95901 98415	364	Ditto as last	Lodge Green. Field bank running downslope from eastern end of [W24].
W26	SD 95905 98383	357	Gunnar's Saetre perhaps! House Number 5/5	Lodge Green. The most westerly of the five rectangular structures interpreted as Gunnar's Saetre.
W27	SD 95884 98353	350	Gunnar's Saetre perhaps! Associated field system.	Lodge Green. Trackway.
W28	SD 95865 98387	354	Gunnar's Saetre perhaps! House Number 4/5	Lodge Green. House No 4. This rectangular platform measures 16m 7m overall. Extensively quarried for the adjacent sheep stell.
W29	SD 95866 98378	352	Gunnar's Saetre perhaps! Associated field system.	Lodge Green. Small cairn or clearance heap adjacent to entrance to House No 4.
W30	SD 95849 98396	355		Lodge Green. L shaped sheep stell.
W31	SD 95819 98442	355	Gunnar's Saetre perhaps! House Number 3/5	Lodge Green.
W32	SD 95495 98584	360	Bents	Foundations only remaining structure of a substantial post medieval farmstead. Not indicated on recent O Maps.
W33	SD 95369 98699	362	Bents	L-shaped stone walled sheep stell.
GS13	SD 96135 98468	402	Lodge Green	Isolated small cairn* at edge of smal scarp. Cairnfield complex [GS13–22] near sheep stell in open pasture above Heights.

[Feature Reference]	BNG Reference	Altitude (m)	Notes	Description
GS14	SD 96233 98443	404	Lodge Green	Sheep stell.
G\$15	SD 96259 98439	404	Lodge Green	Medium cairn.
GS16	SD 96267 98438	405	Lodge Green	Small cairn
GS17	SD 96262 98429	403	Lodge Green	Small cairn
GS18A	SD 96270 98429	403	Lodge Green	Small cairn
GS18B	SD 96276 98432	404	Lodge Green	Small cairn
GS19	SD 96277 98441	407	Lodge Green	Medium cairns.
GS20	SD 96295 98423	405	Lodge Green	Medium cairns.
GS21	SD 96315 98410	404	Lodge Green	Small cairn
GS22	SD 96316 98403	403	Lodge Green	Medium cairns.

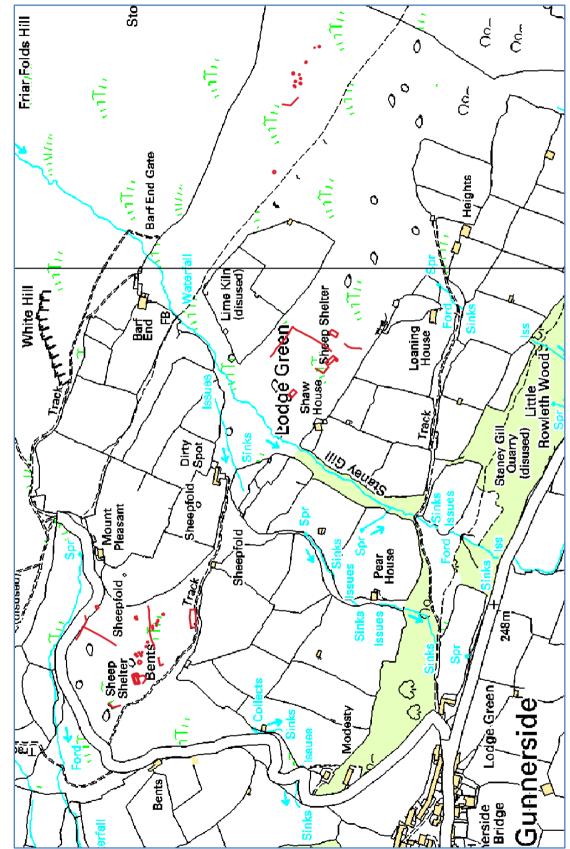




Figure: 59 Bents, Lodge Green and Heights (Chapter 4) Survey Extent.

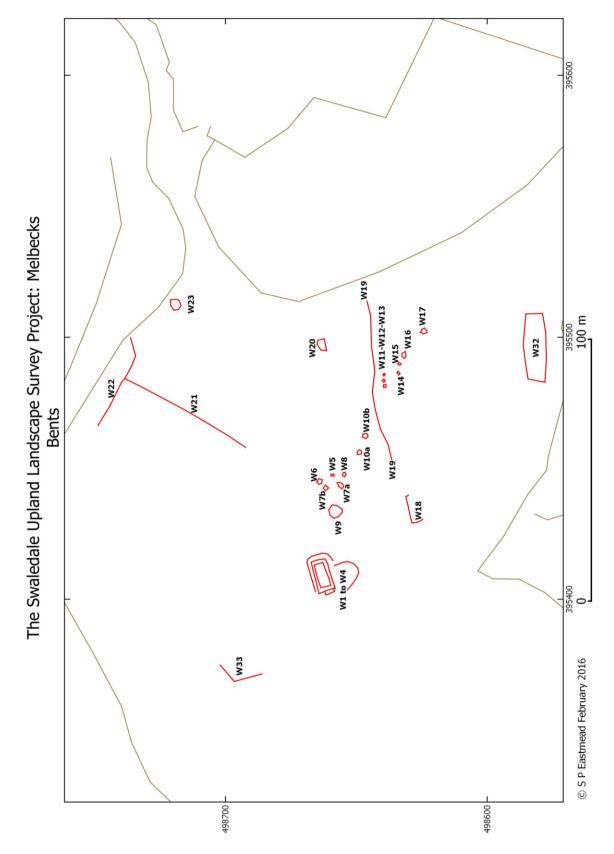


Figure: 60 Bents Feature Numbers.

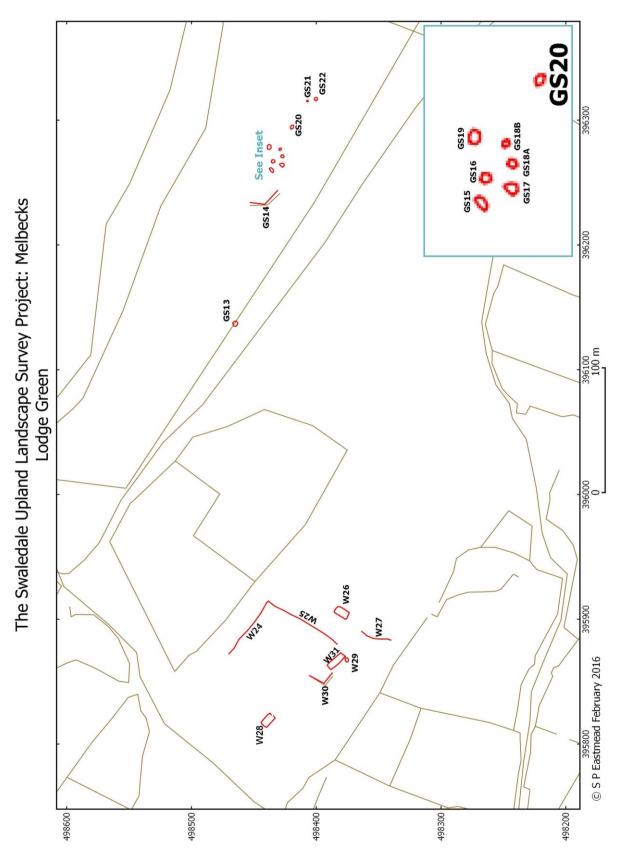


Figure: 61 Lodge Green Feature Numbers

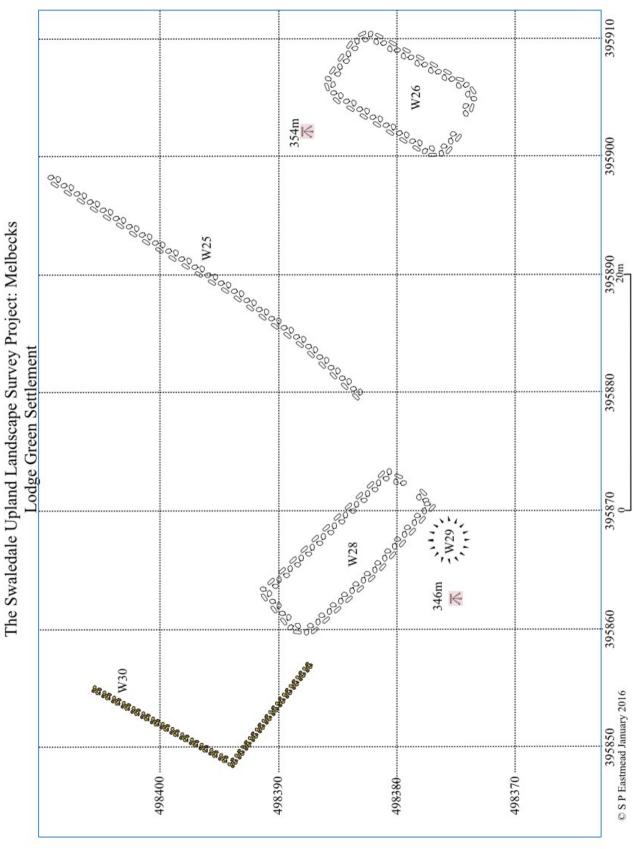


Figure: 62 Lodge Green Settlement Feature Numbers

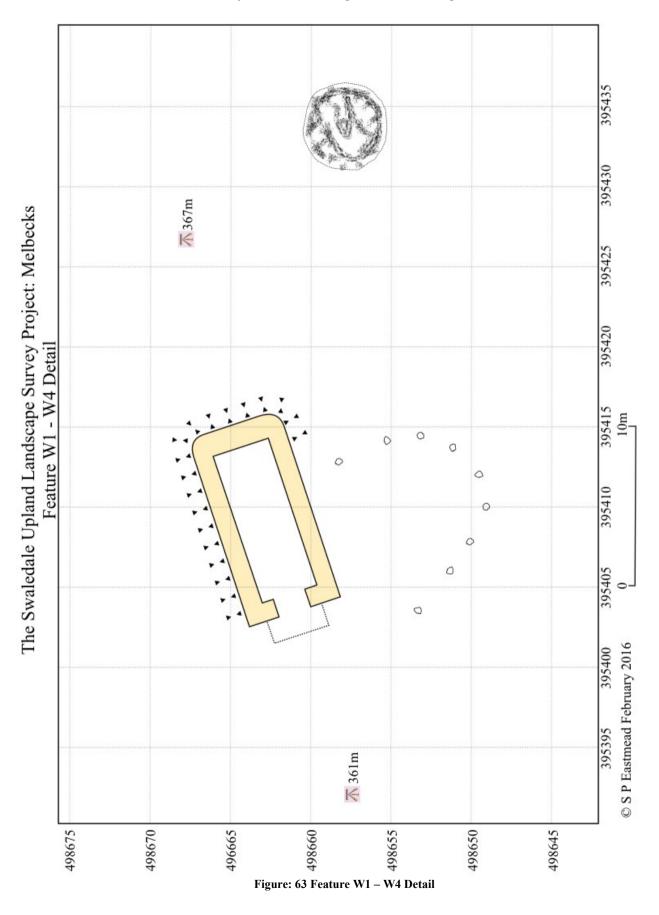




Figure: 64 (Cover Image) A Round Cairn (F9), the remnant of a once prominent stone cairn on Low Moor Pasture.



Figure: 65 Blades and Brownsey Moor End in Winter.

5.1 The Area Surveyed

This is the third and the widest ranging section of this report. The section of the survey starts below Stoops Rigg and extends eastwards across the limestone pastures to Barf and Low Row Pasture before terminating just west of Stanley Gill Hole. Here, we surveyed the remnants of a coaxial field system and a few scattered Bronze Age cairns. The survey then extended northward across the moorland heath of Low Row Pasture to record further field boundaries above the quarries at Barf Edge below the walled pastures below Brownsey House and

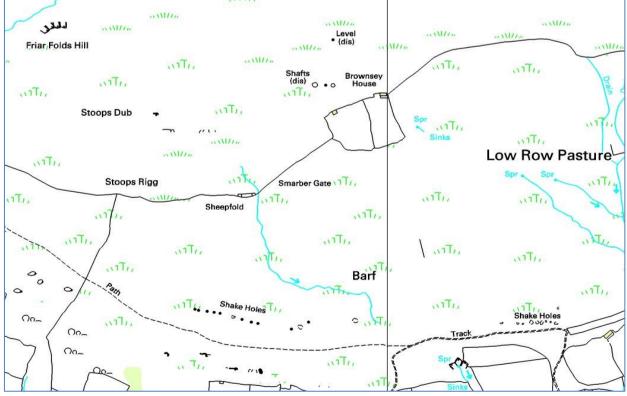


Figure: 66 Low Row Pasture Location Map

eastward to Green Sikes and Blades. Finally, the survey was extended beyond the moor wall to include the lowest south facing slopes of Brownsey Moor above Brownsey House.

The presence of lead mine remains, quarries, abandoned buildings large or small are noted and photographed. Further description of these more recent features is beyond the scope of this survey. The historic use and occupation of these interesting relicts of the Miner-Farmers who made their living here is the task of the historian rather than the archaeologist.

5.2 Site recognition and earlier records

The evidence for earliest human activities and occupation on Low Row Pasture, Lodge Green, Bents and at Winterings had been recognised during informal fieldwork by Tim Laurie over many decades. This evidence is described here within an overall Historic Landscape Survey for the first time. All or most of the sites and finds of all periods have been described and detailed as specific topical features within previous publications. **Reference: T. C. Laurie, 2004, op. cit.**

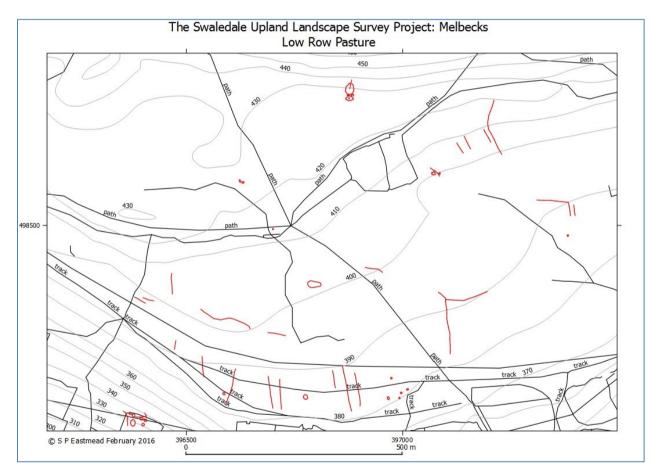


Figure: 67 Low Row Pasture Landscape Archaeology Features

More recently, individual sites and finds from the area have been recorded as records on the SWAAG Database – see Chapter 7.

At Tim Laurie's. instigation during the early 1980's a small-scale survey was undertaken at Low Row Pasture as a 'training exercise' for Students of a Leeds University Further Education Class, led by Dr. Jenny Price. This training survey based on the coaxial field system was restricted to a relatively small area. For this reason, the survey has not been published. Until this survey, no comprehensive archaeological survey of Low Row Pasture and adjacent areas has been available.



Figure: 68 Chapter 5. The Survey Area photographed from across the Dale: Great Rowleth above Rowleth Wood, Barf Side, Low Row Pasture and Melbecks Moor (under cloud).

5.3 Arrangement of the Text

Archaeological Feature Reference Numbers are those shown on (Figures 69, 70, 119 & 120) and in the chapter's Gazetteer.

Archaeological features and finds will be described in chronological sequence. The Early Prehistoric, Mesolithic and Neolithic lithic scatters and stray finds will be detailed. The several round cairns, a ring cairn and the numerous burnt mounds; all Late Neolithic or Bronze Age character are recorded.

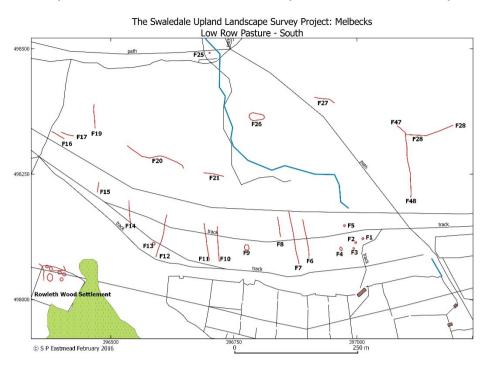
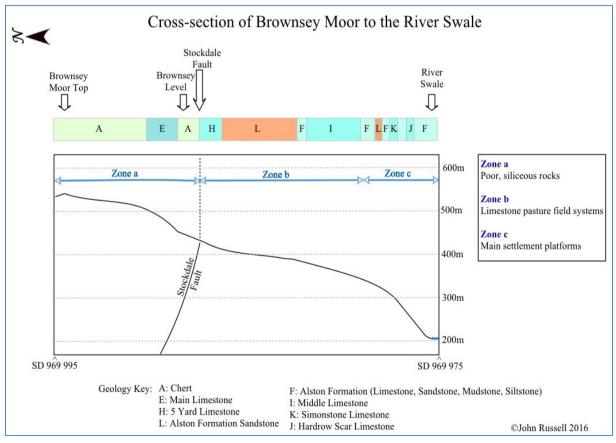
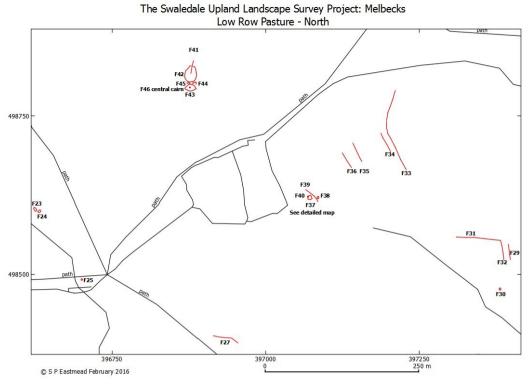


Figure: 69 Low Row Pasture. Feature Location Map-South.



Note: Figure: 8 from Chapter 2 is repeated below, regarding zones: a, b and c.

Repeat of Chapter 2 Figure 8: Section to illustrate the disturbance of strata at the Stockdale Fault. (Sketch detail: ©John Russell).



Chapter 5: Low Row Pasture and Brownsey Moor5.1 The Area Surveyed

Figure: 70 Low Row Pasture. Feature Location Map North.

Finally, we have surveyed the yet undated but pre-peat coaxial field systems and related features which cross the calcareous grassland of Zone c on the Middle Limestone above Barf Side Scar (Figure: 71), [F1–F15]. This coaxial field system may be associated with the platform settlement of late Iron Age or Native Roman affinity lower down the daleside at Great Rowleth (Figure: 67,) [F50]. The upper limit of the coaxial field system seems to have terminated on a heavily quarried boundary which follows the quarried sandstone edge at Barf Scar. However, the existence of fragmented field boundaries which cross the poorly drained acidic moorland on the Alston Series sandstone above Barf Quarries indicate that the acidic moorland pasture of Zone b was also managed. [F16–F51].

As if to confirm the preference for calcareous grassland during prehistory a further coaxial field system which predates the present-day stone walled enclosures below Brownsey House can be seen on the outcrop of the Five Yard Limestone, see (Figure: 67).

No settlements directly associated within these fragmentary field systems have been recognised north of Barf Side Scar or on Brownsey Moor.

Evidence for extensive earliest human activity in the survey area is confined to outcrops of limestone. This evidence comprises lithic finds of all periods. Selected artefacts representative of these lithic finds is detailed and described below.

The existence of groups of stone cairns together with the heavily reduced remains of one very large isolated round cairn [F9] and the complex ring cairn (Figure: 103) Features [F43–F46]



Figure: 71 Lower Zone a, Barf Side Scar. Outcrop of the fossiliferous Middle Limestone. View westward.

provide evidence for Bronze Age activity on this elevated limestone grassland pasture.

Finally, the remains of abandoned farms and other related ruined structures of the Miner-Farmers who once lived and worked here are briefly noted together with evidence for early industrial activity including lead mining, lead smelting, lime kilns and the quarrying of stone.

5.4 Geology



Figure: 72 Barf Quarries. The exposed bedrock has visible glacially striae.

The more prominent strata and structural features at Low Row Pasture include:

1. The outcrop of the Middle Limestone which forms Barf Side Scar, in Zone c as seen on (Figure: 71).

2. The outcrop of the fell sandstone, Zone b, overlies the Middle Limestone and is heavily quarried for its full length at the Barf Quarries, (Figure: 72). These quarries obliterate the junctions of the coaxial field banks with the terminal boundary [F20]. This fell sandstone strata underlies Low Row Pasture (Barf), a wide elevated terrace of over grazed and poorly drained pasture. (Figures 73 & 74).

3. The Stockdale Disturbance or fault complex, is the boundary fault marking the junction of the Askrigg Block and the Stainmore Trough to the North. (Figures: 73 & 74) illustrate the scenery and strata at the Stockdale Fault centred at Brownsey House.

4. The Five Yard Limestone outcrops below Brownsey House on the down throw side of the Stockdale Fault. The bright green calcareous grassland of Brownsey House pastures mark the outcrop of this Limestone. These fertile pastures and the enriched grassland of the open moorland to the east of the pastures, which are also on this Limestone, provide a sharp contrast to the acidic heath vegetation of the main areas below which are on thin peat over sandstone of the Alston Series.

5. The Main Limestone, faulted against the Five Yard limestone on the upthrow side of the Stockdale Fault, forms the lower slopes of Brownsey Moor.

6. The Main Limestone has been trialled for lead, without success, at the Brownsey Level and by a few shafts north of Stoups Rigg. (Figure: 2).



Figure: 73 View westward across Low Row Pasture from the Brownsey Level (F41) on the line of the Stockdale Fault.



Figure: 74 Low Row Pasture: Zone b in foreground. Brownsey House with its walled Pastures on the line of the Stockdale Fault in distance with Brownsey Moor (Zone a) beyond the wall. The coaxial field system on the Five Yard Limestone on open moorland to the east of the walled pastures can just be seen.

7. The Richmond Cherts form the upper slopes of Brownsey Moor End to the North of the Stockdale Fault.

8. Stoups Dub, a peat-infilled mire today and once sometime during Prehistory, perhaps a shallow Tarn, is overlooked by the Mesolithic Occupation Sites [F22] located on the outcrop of the Five Yard Limestone.

5.5 The British Geological Survey

The source of identification of the strata described above (Chapter 2 Figures 6, 7 & 8) is from the detailed description of the geology and mineral deposits of North Swaledale, in: K.C. Dunham and A.A. Wilson, 1985. B.G.S. 'Geology of the North Pennine Orefield', Volume 2: 'From Stainmore to Craven' Chapter 9, The North Swaledale Mineral Belt, Figure: 25 and page 128. The reader is referred to this fine work and to British Geological Survey Map Sheet 40, Solid and Drift Edition: Kirkby Stephen for details of the complex geological structures on the line of the Stockdale Disturbance.

5.6 Relief and Vegetation

Lidar Image, (Figure: 75). depicts the relief of the Low Row Pasture Survey Area. Archaeological features are shown in red. The settlement platforms at Great Rowleth, previously surveyed, can be seen at the extreme

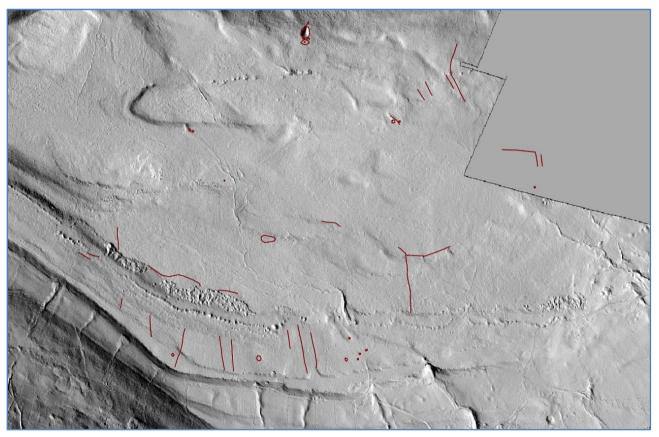


Figure: 75 Chapter 5 Survey Area, Relief and Features surveyed. Lidar Image

bottom left corner. The varied soils arising from the abruptly differing geological strata of the survey area has determined the vegetation both present day and of prehistory.

In response to the geology, the vegetation of the Survey Area, both of today and that during prehistory can be assigned to three zones-see Chapter 2 (Figure: 8).

5.6.1 Zone c - the lower zone

(Figures: 64, 65, 68, 71 & 77) The Lower Zone comprises the grassland on the Middle Limestone at Barf Side Scar northward to the sandstone edge extensively worked along its full length for building stone at the Barf Quarries. The grassland on the Middle Limestone at Barf Side gives way to acidic moorland heath on thin peat which has encroached to mask the field boundaries over the limestone below the quarried edge.



Figure: 76 Zone c: coaxial field boundary bank [F12] crossing limestone pasture to disappear below encroaching peat, Barf Quarries higher upslope

5.6.2 Zone b - the middle zone



Figure: 77 Zone b: moorland heath over the sandstone of Barf Pasture, view eastward from Barf Edge. Survey of coaxial F23 in progress.

Zone b (Figures: 72, 73, 74 & 77) Comprises area of acidic and wet moorland known as Low Row (Barf) Pasture which rises gradually northward from Barf Quarries, up to the Moor Dike Wall and to Brownsey House Fields.

Low Row (Barf) Pasture is the wide moorland terrace which rises from the extensively quarried Barf Edge northward up to the Moor Dike Wall and the lower limit of the dry-stone walled pastures below Brownsey House.

The vegetation of these high pastures is poor, wet, acidic and unproductive heath moorland on thin peat over sandstone. The vegetation, once heather moorland, has little heather today and is dominated by Heath Rush, Juncus squarrosus, together with areas of tussocks formed by the Purple Moor Grass, Molinia caerulea.

5.6.3 Zone a - the upper or moorland zone

The Survey was extended north from the Moor Dyke to include the south facing slopes of Melbecks Moor from Stoups Rigg, across Stoups Dub to Brownsey Moor End. Brownsey House and its associated walled pastures and the limestone grassland on the Middle Limestone to the east of Brownsey House are all included in Zone a (Figures: 74, 78 & 79).

The Stockdale Disturbance or the Stockdale Fault (Figure: 73 & 74) traverses the survey area and divides Zone b from Zone a. The line of the fault is marked by dark brown moorland heath on the sandstone strata of Zone b contrasting with the bright green calcareous grassland on White Hill and below Brownsey House.



Figure: 78 Zone a: grassland on the outcrop of the Five Yard Limestone. View southward over Swaledale.

5.7 The Stockdale Fault

The Stockdale Fault traverses the whole survey area and has a profound effect on the landscape and vegetation.

This fault is thought by some Geologists to be the southern boundary between the Stainmore Trough and the Askrigg Block.

The Stockdale Fault Complex is described by the BGS as 'everywhere unmineralised'. Despite this, the exploratory Brownsey Level, (Figures: 2, 79), was driven into Main Limestone below Richmond Chert strata on the northern side of the Stockdale Fault, 'without success'.

The unproductive Stockdale Vein was also tested at a few shafts north of Brownsey House. The spoil dump of the Brownsey Level overlies a small curvilinear stone banked enclosure interpreted as a complex ring cairn or enclosed cremation cemetery [F43– F46] dating to the Earlier or Middle Bronze Age.

Reference: Dunham & Wilson, 1985, op. cit.



Figure: 79 Zone a: Brownsey Level, driven into the Main Limestone on the line of the Stockdale Fault. The slight circular stone bank of the probable ring cairn in foreground.

5.8 Aspect



Limestone.

Despite sharing the same favourable southerly aspect, the very different landscape character of each of the above three zones (a, b & c) illustrates the powerful control on human activity exercised by the differing geological strata on the composition of the vegetation.

Acidic soils over sandstone and chert strata supported stunted upland oak-birch woodland during prehistory. Low Row Pasture on base nutrient poor soils over sandstone remains today poor, overgrazed moorland heath.

Evidence for past human activity is confined to the limestone outcrops (Figure: 80) above the most constant springs where hazel scrub and rich grassland

pasture would have provided browse and grazing for both wild and domesticated herds throughout prehistory.

5.9 The Contemporary Prehistoric Environment

Based on pollen evidence from elsewhere within the Swale Catchment and from cave deposits elsewhere in the Pennines, the uppermost dale sides on and below outcropping limestone supported species-rich ash/ wych elm woodland with hazel scrub throughout the Later Mesolithic, Neolithic and Bronze Age.

Red deer, roe deer, wild pig together with their fur bearing predators wolf, fox, lynx, otter and marten were all in turn hunted in season by humans. In due course, the open light woodland parkland landscape of the upper dale sides became attractive to the herds of pioneering seasonal, transhumant Bronze Age pastoralist farmers.

The lower dale slopes were probably under thick species-rich deciduous woodland and relatively impassable. The river flood plain, now good pasture, was thick alder carr.

The seasonal cairn field and unenclosed round house settlements of the first small Bronze Age pastoral clearances on the upper slopes developed through time to form permanent settlements. These settlements were associated with the development of wide-ranging open grassland managed pastures-the coaxial field systems.

Extensive coaxial field systems have been recorded, firstly by detailed EDM Theodolite Survey and by later GPS Survey on both sides of the Swale from Marske and Ellerton upstream to Barney Beck and Low Whita.

References:

Innes, J. B. and Blackford, J.J. 2003. Yorkshire's Environmental Resource. in: T. G. Manby et al. (eds.), The Archaeology of Yorkshire, Yorkshire Archaeological Soc. Occ. Paper No 3.

Laurie, T.C. et al. 2011. 'Coaxial Field Systems in Swaledale, in R.D. Martlew, ed. 'Prehistory in the Yorkshire Dales'. Place.

The identified multi-period prehistoric field systems usually share a common NNE–SSW axis. They extend far beyond the present limit of enclosed pastures. For example, the coaxial field system on Marrick Moor originates from unenclosed settlements located close to Stelling Springs near the Hurst Road at 309m OD. Substantial stone banked parallel, or co-axial boundary banks, once hedgerows with hedgerow trees rise from these settlements to extend across the whole of the moorland on Copperthwaite Allotment to terminate at 430m OD on Fremington Edge.

Early Prehistoric Iron Age radiocarbon dates have been obtained from a charcoal deposit beneath the latest of three different coaxial field boundary systems on Calverside, this charcoal represents clearance of hazel scrub from areas of managed productive grassland pastures, now peat and heather moorland. These managed landscapes on the uppermost Dale sides can be interpreted as well managed sheep runs. Swaledale has always been sheep country. Enough milch cows being kept to for local needs only. Roman Army Records demonstrate the supreme quality and importance of British woollen goods. It is therefore reasonable to assume the existence of Iron Age farming communities in the Pennine Dales capable of supplying developing markets for woollen goods from the Middle Iron Age to the period of Roman Occupation.

The contemporary Bronze Age prehistoric environment was thus very different indeed from the open heather dominant moorland of today. After the Climatic Optimum reached during the Bronze Age, increased cooling and rainfall, coupled with increased grazing pressure during the Iron Age caused leaching, podsolisation and acidification of upland soils.

The familiar open, heather dominant moorland landscape of today thus finally became established during the period of Roman occupation.

In summary, radio-carbon dates obtained from trenches cut through coaxial stone field banks on Calverside and pollen evidence from Ellerton Moor during the SWALB Project, proved that the low but substantial stone dump coaxial field banks accrued from fence lines which developed in time, by stone clearance to form hedge banks with hedgerow trees. Pollen of Lime (Tilia spp.) which survives today on the cliffs of the Lower Swale Woodlands and Field maple (Acer campestris), a woodland edge and hedgerow tree, was present at Ellerton Moor in the Bronze Age and Iron Age horizon. This pollen sampling site was close to and overlooked by Bronze Age cairnfield settlement remains.

Climatic deterioration, increasing coldness and rainfall, during the Later Iron Age and subsequent period of Roman Occupation caused leaching of the overgrazed soils on the upper dale sides. Podsolisation with impeded soil drainage from iron pan, leading to the replacement of the grassland with the acidic heather/sedge moorland so admired today.

5.10 The Archaeological Remains

5.10.1 Lithic finds and scatters

Isolated stray finds of flint and chert are noted. Areas with concentrations of flint and chert artefacts representing occupation sites of different periods are also described.

5.10.2 Stone cairns

Isolated small stone cairns which may be funerary cairns occur at several locations within zones b and c of this large survey area. Grouped cairns have been recorded at two locations, at Winterings [F1–F5] and close to the sheep stell on Heights Pasture. The fact that both small groups of stone cairns are isolated, points to the possibility that these cairns are funerary monuments rather than field clearance heaps.

References:

1. Harding, A.F. 1994 'Prehistoric and early medieval activity on Danby Rigg, North Yorkshire'. Archaeological J. 151 16–96.

2. Lynch, F 1972. 'Ring Cairns and related monuments in Wales'. Scottish Archaeological Forum, 4 61–80.

66

5.10.3 Ring Cairn

Located below the Brownsey Moor Lead Mine Level (Figure: 2, 79 & 103) Zone b, is a slight ovoid ringwork defined by a stone bank [F43] with several small peripheral circular cell-like structures attached is located below and partly overlain by the Brownsey Level. This feature has been interpreted as a complex ring cairn. These slight stone banked ring work features, which have no entrance and are clearly not hut circles or stock enclosures are the usual form of funerary monument within Swaledale and are best regarded as a ring cairn.

Ring cairns, or enclosed cremation cemeteries, are funerary enclosures characteristic of the earlier and Middle Bronze Age. These slight stone banked ring works may represent the final phase of complex ritual and funerary monuments. Excavated examples of the many ring cairns on the North Pennine Fringe have been found to contain cremation burials within collared urns and are also known as enclosed cremation cemeteries.

5.10.4 Burnt Mounds

A total of four burnt mounds at two different spring rise locations within Zone b were recorded.

5.10.5 Field systems defined by low, stone dump field banks

Early field systems with boundaries which share a common axis, i.e. are approximately parallel, are described as co-axial.

The early, coaxial field banks recorded here at Barf Side within the lower Zone c have been extensively obliterated by the stone quarries at Barf Edge. Generally, field banks have been much reduced by quarrying of convenient surface stone in the proximity of later farms and field walls. Their survival in locations readily access from tracks and near recent stone walls is very poor. Consequently, the field systems are fragmentary.

The long field boundaries on the moorland heath of Barf or Low Row Pasture within Zone b are less well organised and probably represent later management from farms at Blades or an attempt to extend the early field system above Barf Side Scar.

5.10.6 Settlements

No visible early settlement remains have been recognised within the early field systems zones: a or b. Timber built round houses on level ground leave no surface trace or may be buried under the thin peat which covers the better part of Low Row Pasture.

It is considered probable that the coaxial field system above Barf Side Scar relates to settlements of Iron Age date located in Zone a, at a more sheltered elevation on the daleside.

In support of this suggestion, a small trackway leads upwards from the enclosed settlement at the top edge of Rowleth Wood towards the field system on the limestone above Barf Scar (Figure: 109).

The Rowleth Woods settlement (Figure: 109) is well-preserved, having six circular house platforms and two adjoining stock pens may well relate to the coaxial field system above Barf Side Scar.

Enclosed settlements of stone founded round houses associated with field systems which rise to reach higher elevations on the Dale Sides are very characteristic of Late Iron Age or Native Roman Settlements elsewhere in Swaledale.

References:

Percival Turnbull and Deborah Walsh,1997: 'A complex ritual sequence at Oddendale near Shap.'

Bowey Keith, 2010. 'The Harden Moor Ring Cairn. An account of the excavations 1958–60, 1983–4'. In: 'Prehistoric Yorkshire' Y.A. Soc. Prehistory Section.

Fleming, A. 1998. 'Swaledale. Land of the Wild River'. Edinburgh. 2. Laurie 2003 op. cit.

Rectangular settlement enclosures are known to exist within the lower enclosed pastures. These unrecorded settlements could relate to the coaxial field system on Low Row Pasture. Many settlement features have been ploughed out and are not readily visible today.

5.10.7 Mining Remains

Mining Remains are a significant element in the historic landscape of this area. The reader is referred to The British Geological Survey Maps and Memoir for details of the complex geological structure, strata and lead mining of North Swaledale.

5.10.8 Deserted and ruined Farm Buildings

The presence of disused, ruined farm buildings is noted, and photographs provided, but their history will not be detailed as being the province of the historian and beyond the scope of this survey.

5.11 The Archaeology Remains in Detail

Each of the features listed in 5.10 are described in detailed below. Please refer to the gazetteer and map (Figure 118) feature locations within the area surveyed.

hunting activities.

5.11.1 Lithic finds and scatters Zone a

Lithic finds from a limestone outcrop on the edge of Barf Dub indicative of Early Prehistoric occupation and



Figure: 81 Small shouldered point. White patinated flint.

Lithic finds [F22–F31] and the complex burnt mounds [F23, F24] below the spring rise seen on (Figures: 70, 80 & 120) indicate that this vantage point was occupied at different periods after about 8000BC.

Feature [F22] is a characteristic multi-period prehistoric occupation site. On its northern side, this outcrop of limestone overlooks Barf Dub, a peat in-filled mire which, during prehistory, was an open water tarn fringed on the other three sides by stunted oak-birch and hazel scrub woodland. Artefacts of flint and chert characteristic of different periods are present at each of three lithic scatters located on the fringe of this limestone outcrop. The sites are at vantage points with wide views above a constant spring, and probably occupied and reoccupied at intervals by hunter groups over a very long period.

End scrapers, burins and utilised flakes of both flint and chert are present. These, together with a single small tanged point, (Figure: 83) suggest that occupation at Barf Dub commenced sometime after around 8000BC during the Earlier Mesolithic Period.

Just two minute geometric microliths are present. These, together with further lithic evidence characteristic of Mesolithic cultures, points to occupation of this upland tarn side between 8000 and 3500BC are present, see (Figures 82–88).

Representative finds of Mesolithic character:

The presence of end scrapers, burins on chert flakes, blade segments, several micro-burins, micro-bladelets, and the one possible small shouldered point suggest early occupation here. Strangely, few cores are present indicating this site was a temporary hunting site for active hunting parties with little time to butcher their animals and repair their weapons.

The upper, horizontal surfaces of the limestone outcrops south of the Stockdale Fault, on the Five Yard Limestone are covered with heather on thin peat. Lithic finds are confined to stray finds from molehills or rabbit scrapes at the limestone outcrop. It can be expected that the occupation sites with concentrations of lithic evidence for knapping and weapon repair, including clustered microliths and cores etc., will be located on the level top of the outcrop. These sites are secure beneath thin peat and are a good prospect for future research.



Figure: 82 Rod microlith, broken, one of the two minute microliths found at the occupation site which overlooks Barf Dub

The presence of two conjoined burnt mounds, [F23 & F24] at the spring which rises below the southern edge of the limestone outcrop (Figure: 80) together with the presence of later artefact forms in

their vicinity provides evidence for Late Neolithic/ Bronze Age occupation at Barf Dub.



Figure: 83 Lunate microlith from lithic scatter on Five Yard Limestone (F22) overlooking Barf Dub.



Figure: 84 End scraper. White patinated flint.



Figure: 85 Representative lithic finds from Stoups Dub. Only three of these are flint, the remainder are of chert.



Figure: 86 Further lithic finds of Mesolithic character, all are white-patinated flint. Dorsal view



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Figure: 87 The same artefacts as Figure: 71, ventral view



Figure: 88 Detail of the burin on an elongated chert flake and a flint micro decortical bladelet with battered cortex indicative of beach pebble or glacial erratic flint nodule from coastal clays.

Lithic finds of later prehistoric, Neolithic or Bronze Age character from Stoups Dub.

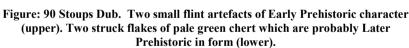
Several finds from White Hill, for example the pressure flaked plano-convex knife, (Figure: 90) and the large flat green chert flake (Figure: 89) which could be suitable as a blank for a pressure flaked arrow point, are characteristic of Later Prehistoric Occupation.

Most the finds from Stoups Dub are un-diagnostic forms which could be of any period. The material includes much white patinated flint but is predominantly local Pennine chert.

Both black Pennine chert of local origin and a light buff coloured chert of uncertain origin are present.

This same light buff chert was the material used on a Late Neolithic, scraper dominated, occupation site on Reeth Low Moor, and the SWAAG database for details of sites and finds from Reeth low Moor.

Reference Laurie, 2003 Op.cit.



The two flakes of quartzite (Figures 91 & 92) are of interest as this rather coarse grained material is rarely found on Pennine lithic sites and may be an indication that suitable material was scarce or that one individual preferred this material. Dunham and Wilson state that in Swaledale, quartz is present in the mineral veins only at the western end, in and around the Sleddale area. In-situ quartz is available only as vein material in the Borrowdale Volcanics of the Lake District. Glacial erratic boulders would be present in the Vale of Eden on the line of the Stainmore Ice but are not present in Swaledale. Quartzite pebbles are present within the Millstone Grit Series, but these are usually very small.



Figure: 89 Plano convex knife. White patinated flint



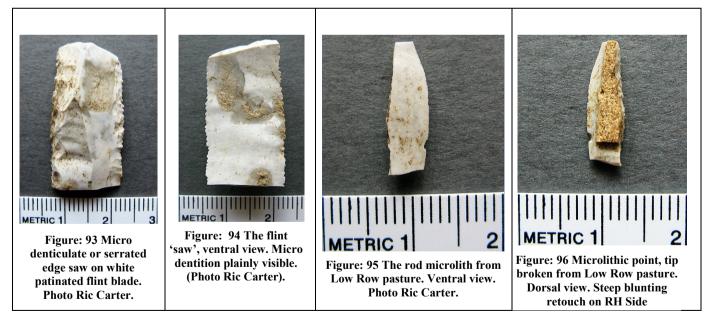




Figure: 92 The two flakes of quartzite (Ventral view) and scraper of opaque white flint (Centre).

• Zone c Lithic Finds

Isolated, stray Mesolithic finds from Barf Side Scar:



The earliest lithic finds from Low Row pasture are two very different artefacts. Each is diagnostic of the Mesolithic or Hunter period of earlier Prehistory.

The first of these finds is the 'narrow blade' rod microlith shown on (Figures 96 & 97).

This 'microlithic' point has a broken tip, probably broken on impact and is unusual in having visible cortex on the dorsal face. This cortex is the original surface of the nodule of flint from which flakes and blades were removed. True microliths were always made from flint blades devoid of cortex. Cortex was considered undesirable on flint arrow armatures.

The second find is the serrated edge blade shown on (Figures 93 & 94). This flint artefact would, when hafted, have served as a small antler or bone-working tool, a saw. A similar flint saw was found in situ in peat on the North York Moors and radio-carbon dated to 6900–6660 cal BP.

Reference: Innes Jim, Laurie Tim and Simmons Ian, 2012. Journal of Wetland Archaeology Volume 12.

• Zone c Lithic Finds

Several stray finds of lithic artefacts of Later Prehistoric, Neolithic and Bronze Age forms have been made from mole hills across the limestone pasture above Barf Side Scar. The most interesting of these are illustrated below (Figures 97–99)

These finds indicate considerable activity on Barf Side Scar during the Late Neolithic and Early Bronze Age.

In addition, a struck (re-sharpening) flake from a Neolithic polished stone axe provisionally identified as of Group 6, Langdale volcanic tuff (Figures 97 &



Figure: 97 Three lithic finds from Barf Side Scar. Discoidal flint knife (F49B), triangular flint arrowhead (F49C) and large chert flake a blank for an arrowhead, (F49D)

98) has been recovered from a rabbit scrape on the remnant of the quarried round cairn [F9].



Figure: 98 Two thumb scrapers from Barf End Scar



Figure: 99 Late Neolithic/Early Bronze Age arrowpoint (F49A) one of several Later Prehistoric lithic finds found above Barf Side Scar. Now in the Swaledale Museum.

5.11.2 Stone Cairns

Zone c

This section describes the remnant of one large round cairn, the Barf Side Round Cairn [F9) and the rather few small and medium size round cairns in the area surveyed.



Figure: 100 Round Cairn (F9). The remnant of a once prominent, stone round cairn on Low Row Pasture.

2.1 The Barf Side Round Cairn [F9]. The remnant of a once prominent, stone round cairn on Low Row Pasture. The cairn is located on a slightly elevated but low limestone knoll close to the modern farm track. It has long been used as a convenient quarry so that all stone except a remnant of sandstone cairn fill has been completely removed. To show the perimeter of the remnant of the Barf Edge Round Cairn outlined by a Group of Friends of the Swaledale Museum. This remnant is a turf covered, circular mound of sandstone rubble cairn material. The cairn was identified by Tim Laurie in early summer when it was noticed that the Mountain Pansies (Viola tricolour) abundant on the limestone turf were entirely absent on the sandstone rubble of the cairn which masks the underlying limestone.

Fortunately, the earth-fast and vegetated remnant of stone which survives is enough to provide a recognisable circular cairn feature which measures 13.4m x 12.2m overall.

The cairn is well located, at the viewpoint on the highest rise of the Middle Limestone Pasture above Barf Side Scar, from which an uninterrupted view eastward down through Swaledale across Richmond to the Vale of Mowbray is possible. This cairn is positioned at the only location from which the other similar stone round cairns, those at Cringley Pasture and on Fremington Edge are intervisible. For details of those cairns, see SWAAG Database Records.



Figure: 101 Struck flake (F49E) from a Polished Stone Axe, provisionally identified as Group 6 Langdale Volcanic Tuff, found from a rabbit scrape on the body of a cairn.



Figure: 102 The same struck flake from a stone axe. Obverse view.

A struck flake from a polished stone axe was found at a rabbit scrape on the body of this cairn, see (Figures 101 & 102).

2.2 Group of five small or medium stone cairns [F1–F5]. These cairns are located on both sides of the presentday track from Blades to Heights. They measure between 4–6m in diameter and are all consolidated, well vegetated and clearly ancient. No cist structures are visible as most are relatively undisturbed.

On balance of probability these cairns are unlikely to be stone field clearance heaps and are interpreted as of funerary purpose.

5.11.3 Ring Cairn

This slight feature was first recognised by the sharp eyes of Rick Carter. Ring Cairn [F43] is a very slight but complex structure, comprising an elliptical low stone rubble vegetated ring bank with long and short axes of 16m and 12m respectively. At least three smaller curvilinear stone structures [F44, F45 & F46] are located on the northern periphery of the main elliptical ring bank. The ring bank and small peripheral ring features are best seen from the top of the Brownsey Level spoil heap, (Map Figure: 103). A small cairn like feature, recently adapted as a grouse feeding station, is at the centre of the elliptical enclosure [F46].

Notes on Ring Cairns generally:

Ring cairns can be defined as circular or occasionally ovoid stone dump embanked enclosures which are not round house or stock enclosures. Close consideration usually confirms that they are clearly not domestic or pastoral in context. Very many ring cairns have been the subject of extensive excavations. All confirmed examples are found to have been funerary in purpose. Since these stone-dump banked enclosures include cremations within collared urns of Late Neolithic and Earlier Bronze Age form buried in pits, they are more accurately described as enclosed cremation cemeteries. The sometimes-slight stone dump ring banks which usually define ring cairns may be deceptive in their simplicity. For example, at advancing edge of the vast limestone quarry at Oddendale, high above the M6 corridor a broad but low, vegetated stone bank and a small fragment of cremated human bone from a mole hill was the only visible evidence for the existence of the complex ritual sequence located at a view point very similar to that chosen for the Barf Side Cairn, [F9]. These slight remains were recognised by the experienced eye of the Late Percival Turnbull. This ring bank, when fully excavated, was confirmed to be an Early Bronze Age ring cairn and cremation cemetery. In turn, the slight stone bank of the ring cairn was found to overlie a double concentric ring of ramped post holes cut into the limestone

as the foundations of massive oak posts. This double ring Neolithic timber post circle was radiocarbon dated to the end of the Third Millennium BC.

Ring cairns, especially pristine examples which have not been excavated, are nationally scarce and, when recognised, all qualify as Ancient Monuments for Schedule Protection.

A total of 27 ring banks within the within the Ure, Swale and Tees/Greta River Catchments, were recognised during earlier fieldwork by Tim Laurie. All these sites were considered for inclusion as Ring Cairns within the

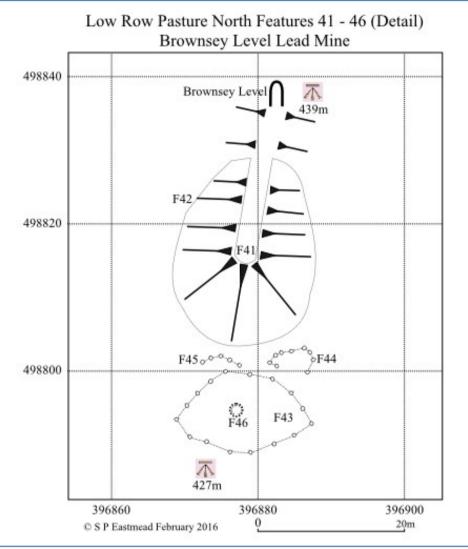


Figure: 103 Brownsey Level Archaeology

Monuments Protection Programme. Following subsequent site visits and detailed recording by Percival Turnbull, all these sites are now Scheduled National Monuments.

Further ring cairns have been recognised in Swaledale during recent fieldwork, they are usually hidden beneath thick heather and only become visible after periodic heather burning. Just one probable ring cairn [F43] has been recognised to date within this survey area.

References to Bronze Age Cairnfield Landscapes and Ring cairns:

- 1. Boughey, K. 2010. Op. cit.
- 2. A. F. Harding, 1994. op. cit.
- 3. Percival Turnbull and Deborah Walsh, 1997. Op. cit.

5.11.4 Burnt Mounds

Burnt mounds have been recognised at two spring rise localities within this area. The first of these locations [F23 and F24] is on Brownsey Moor at the Spring rising below the Five Yard Limestone, see (Figures: 104 & 105).

The second and more easterly of these locations is the spring rise some 200m east of Brownsey House, at SD 97072 98625, 404m AOD.

Brownsey Moor Zone a

Spring rise below the Five Yard Limestone. Two conjoined burnt mounds here, {Figures: 104 & 105) [F23 & F24].



Figure: 104 Brownsey Moor. Spring rise below the Five Yard Limestone. Two conjoined burnt mounds here, [F23 & F24]. Lithic finds nearby



Figure: 105 The same spring rise. The two burnt mounds [F23 & F24] under survey.

Brownsey House Spring Zone b

Two burnt mounds (Figure: 106) [F37 & F38] on opposing banks of the stream rising below this controlled spring.

(Figure: 106) shows the smaller and lower of the two burnt mounds [F37 & F38] located on opposing banks of this spring stream just below the spring which rises below the Five Yard Limestone to the east of the enclosed fields below Brownsey House, both burnt mounds are completely vegetated with no fire cracked stone visible. However, these two mounds are so characteristic of burnt mounds that they have been recorded as such.

Several lithic finds have been made from molehills in the open pasture immediately above the Brownsey House spring. These finds confirm Later Prehistoric activity on the rising ground above these two burnt mounds probably associated with these two sites.

Burnt mounds were first recorded throughout Ireland where they were initially known as deer roasts, fulacht fiadh, or the cooking places and bathing sites of the Fianna, who were a heroic dark age Irish Clan.

These sites, crescentic mounds of fire-cracked stone, are by far the most numerous of all Later Prehistoric Sites throughout the British Isles, with more than 7000 burnt mounds recognised in Ireland (Crogan et al 2007, Nicol 2016).

The purposes and uses of burnt mounds include all or any of the uses to which hot water can be put. The use

that I prefer is that of the bath or sweat house / sauna. Cooking with hot stones, brewing, the fulling of woollen cloth have all been suggested and all are probably correct.

Burnt mounds have all been dated from around 800BC to as early as 2400BC and are frequently but not always associated with prehistoric round house settlements of mid to late Bronze Age.

Burnt mounds can be interpreted as indicators of the presence, in their vicinity, of seasonal settlements whose timber tent like dwellings would leave little or no visible surface trace.

For detailed descriptions and the distribution of the very many burnt mounds recently recognised on the NE Pennine Fringe.



Figure: 106 Brownsey House Spring. Lower of two burnt mounds [F37 & F38] below this controlled spring. John Russell is standing at the spring rise.

For full location and photographic details of many of

the burnt mounds recorded to date, please refer to the SWAAG Site Database at: <u>https://swaag.org/DB_PublicMenu.php</u> These sites are representative of the total of more than two hundred burnt mounds recognised to date across the Ure, Swale and Tees/Greta Uplands.

5.11.4 Field Systems

Coaxial field system and stone cairns above Barf Side Scar, [F1–F21] Zone c.

The recognition and survey of the full original extent and limits of the field banks on the limestone pasture above Barf Side Scar has proved to be very difficult for the following reasons:

Field banks located close to modern dry stone field walls or to farm buildings have been removed completely or much reduced by quarrying for construction stone.

Field banks located on the limestone pavement pasture above Barf Side Scar disappear and are lost view below the thin peat which is encroaching on the limestone pavement from the overlying sandstone edge of Zone b.

The significant field boundaries [F20–23] which, were originally continuous but which now survive as an intermittent boundary has been extensively quarried away at the Barf Sandstone Quarries. It is considered that this boundary marked the upslope, northern terminal of the coaxial field system which crosses the limestone pavement above Barf Edge Scar.

The rather few boundary banks recognised to the North of Barf Edge on Barf Pasture are clearly visible except where they disappear below the thin peat which covers large areas of this area.

For this reason, it is not possible to reconstruct the full original extent of the boundaries on Barf Side Pasture.

The survey in progress (Figure: 107) [F7] Coaxial Field Boundary crosses the track from Blades to Winterings.

Reference: see Laurie, T. C. in Manby et al. eds 2003. op. cit.



Figure: 107 Barf Side. The survey in progress. F7 Coaxial Field Boundary crosses the track from Blades to Winterings.

Field system at Barf or Low Row Pasture, Zone b

The remains of two different fragmentary field systems have been recognised at Low Row Pasture.

The lower of the two field systems is the coaxial field system above Barf Side Scar. The individual field banks which define the Barf Side Field System are assumed to have terminated on the long lateral boundary [F20–23] which runs along Barf Edge. This boundary survives only where the original top edge of this extensively quarried sandstone outcrop survives.

The upper of the two field systems see: Field system at Barf or Low Row Pasture, Zone b below.

This field system consists of several fragments of field boundaries widely separated across the upland moorland heath of Barf Pasture to the north of the Barf Quarries.

These boundaries represent the extension of the coaxial field boundaries northward from Barf Edge and subsequent attempts by the farms at Blades to enclose the poor moorland grazing on Barf Pasture.



5.11.5 Settlements

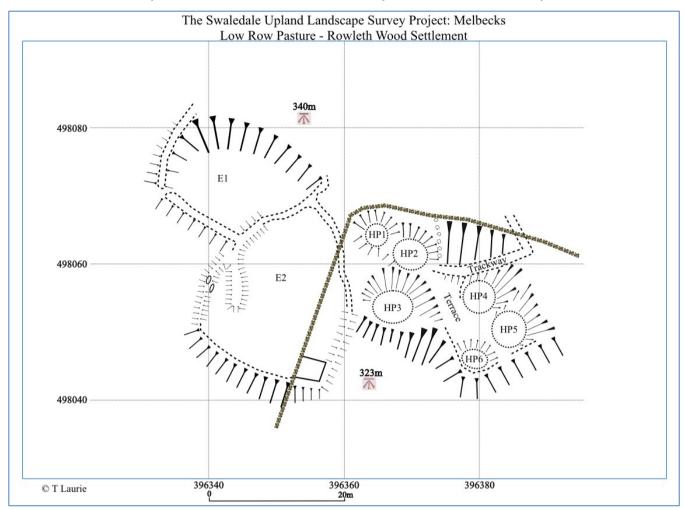
Figure: 108 The Rowleth Settlement. Six house platforms and track way leading up to Barf Side Scar

No visible early round house or other settlement remains have been recognised within the field systems on Low Row Pasture. A settlement of Prehistoric Iron Age character is present at Great Rowleth. Sited on the steep slope below Barf Side Scar. At the upper edge of Rowleth Wood a small trackway leads upwards to the field system on Barf Scar. This trackway originates from the well preserved and previously unpublished enclosed prehistoric settlement of six circular house platforms with two adjoining stock pens below. (Figures: 108 & 109).

This well-preserved settlement is very characteristic of Late Iron Age or Native Roman Settlements elsewhere in Swaledale.

For details of the settlement landscapes of Mid Swaledale, see:

T.C. Laurie, N.W. Mahaffey and R.W. White 2011., 'Researching the Prehistory of Wensleydale, Swaledale and Teesdale.' in: R.D. Martlew, (ed.) 'Prehistory in the Yorkshire Dales' pp 37–59.



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Figure: 109 The Rowleth Settlement (Previously unpublished plane table survey, copyright T. C. Laurie, 1982).

The existence of Later Prehistoric settlement enclosures within the lower enclosed pastures below Barf Side Farm which could also relate to the coaxial field system on Low Row Pasture is very likely (see Google earth Historic Imagery View). These features have been ploughed out and are not visible at surface level today.

5.11.6 Mining Remains

Zone a.

No attempt is made here to provide detailed descriptions of the lead mining remains seen and selectively photographed (Figures: 79, 103, 110 & 111) during fieldwork within this Survey. Rather, since details of these mining remains are available elsewhere. Mining remains are very significant features within the landscape of Brownsey Moor, and it is hoped that the photographs included below will provide a reminder of their importance to the Miner-Farmer communities who lived and worked here.



Figure: 110 The portal to the Brownsey Level

5.11.7 Deserted and ruined Farm Buildings



Figure: 111 The Brownsey Level

Figure: 112 Brownsey House © Mick Borroff 2007

Wesley to be responsible for the dales area. In one of his earliest societies, Rowell, had two brothers called Spencely one lived in Newbiggin in Teesdale, the other in Blades in Swaledale. The first services were conducted in Blades and within a few years the first Swaledale Methodist Society was established, their first Meeting Room was fitted out by William Spencely at Brownsey House. He also created a preaching room at Pickhill in Low Row. The expansion of Methodism in Swaledale is described in Fieldhouse and Jennings, 1978, op. cit.

The family history census information for Brownsey House is summarised at: https://www.swaag.org/DB PublicMenu.php record High at the limit of the walled pastures on Low Row Pasture, Brownsey House (Figures: 112 & 113) survives as a monument to the period when many farming-mining families worked on the margins of habitable land and developed their independent religion. However, Brownsey House pre-dates the digging of Brownsey Level which appears to have been driven in the late 1860's. Dialect versions in the census records include Brownsah or Brownsa House.

Methodism originated in Oxford in 1729 by John and Charles Wesley. Eighteen years later it was established in Barnard Castle in Teesdale by an itinerant preacher, Jacob Rowell, appointed by John



Figure: 113 Brownsey House © Stephen Eastmead



Figure: 114 Brownberry just in the improved enclosed fields below Feetham Pasture 2015 ©Andy Waddington.

was of multiple occupancy. It was unoccupied sometime after 1891 as it is not listed in 1901 or 1911 returns. The 1 in 25,000 Ordnance Survey map calls it Brownberry.

We include photographs of several of the many deserted and ruined farm buildings seen during these surveys. Detailed studies of the histories of these farms are available elsewhere.

Of special note are the remains of Green Sike Farm, see (Figures 116 & 117). This well preserved deserted farm house, hay loft, cobbled yard and small flower bed near the kitchen door has the same sad appearance as the day that

number 475, the data was taken from <u>www.dalesgenealogy.com/</u> which contains all current census data for the Swaledale area.

Some 1.2 km to the east of Brownsey House is Brownberry also know in the census returns as Brown Berry (Figures 114 & 115).

This house was occupied in the first census in 1841 under Brownberry, but under the census returns for 1851, 1861, 1871, 1881 and 1891 it was known as Brown Berry. In at least two census returns it



Figure: 115 Brownberry



Figure: 116 Green Sike Farm

the last occupants walked away.

References:

- 1. Innes, J. B. and Blackford, J.J. 2003, op. cit.
- 2. Swaledale Ancient Land Boundaries Project (SWALB), Interim Reports. op. cit.
- 3. T. C. Laurie, N. W. Mahaffey and R.W. White 2011, in R.D. Martlew, Ed. Prehistory in the Yorkshire Dales pp 37–59
- Wild. J.P. 1978. 'Cross-channel trade and the textile industry.' In J. du Plat Taylor and H. Clere (eds.) Roman shipping and trade: Britain and the Rhine Provinces. C.B.A. Report 24,79– 81.



Figure: 117 Green Sike Farm

5. Laurie, T.C. 1985. 'Early settlement and land division on the eastern approaches to the Stainmore Pass over the Pennines.'

5.12 Low Row Pasture and Brownsey Moor Gazetteer of Archaeological Features

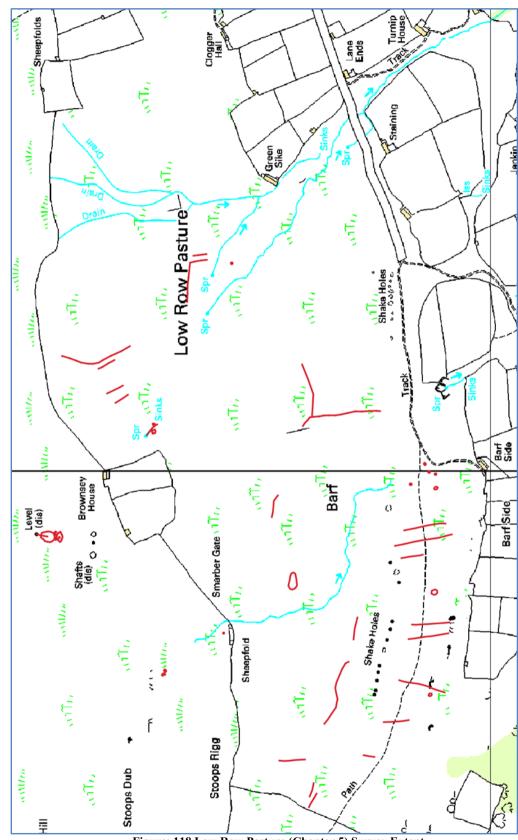
Cairns of any dimensions marked with an asterisk* are significant and may contain burials. These cairns are false crested or aligned at viewpoints, kerbed or otherwise constructed with care.

[Feature	BNG References	Altitude (m)	Description
Reference]			Description
F1	SD 97012 98125	384	Medium cairn*, circular, one of a group of five similar cairns. Probable funerary cairn.
F2	SD 96998 98114	384	Medium cairn*, circular, one of a group of five similar cairns. Probable funerary cairn.
F3	SD 96992 98104	384	Medium cairn*, circular, one of a group of five similar cairns. Probable funerary cairn.
F4	SD 96967 98103	385	Large elongated cairn* one of a group of five similar cairns. Probable funerary cairn.
F5	SD 96973 98149	387	Small cairn*, circular, one of a group of five similar cairns. Probable funerary cairn.
F6	SD 96896 98130	387	Co-axial. Intermittent being greatly reduced by removal of stone. Crossed by tracks. Lost below peat north of tracks.
F7	SD 96782 98129	388	Co-axial. Distinct but reduced by removal of stone. Crossed by tracks. Lost below peat north of track.
F8	SD 96842 98143	390	Coaxial. Distinct north of track.
F9	SD 96775 98108	386	The Barf Side Scar round cairn*. Probable funerary cairn, 13m diameter. Located on limestone knoll above Barf Side with extensive views down Swaledale. This significant and once prominent round cairn has been removed by quarrying down to a remnant of turf covered sandstone rubble. The final remnant of this cairn is just visible and recognised only by the fact that cairn material masks the underlying limestone pavement and that the grassland vegetation on the sandstone cairn is different. The abundant mountain pansies (Viola lutea) so abundant on the limestone, being absent. This cairn would have been intervisible with the similar round cairns, below Cringley Hill and on Fremington Edge. A struck flake [F9A] from a Neolithic Group 6 polished (Langdale Volcanic Tuff) Greenstone axe. From rabbit scrape within the body of this [F9] Cairn.
F10	SD 96717 98117	388	Indistinct. Coaxial field bank. Crossed by track
F11	SD 96695 98112	389	Coaxial field bank. Distinct. Crossed by track.
F12	SD 96605 98124	389	Coaxial field bank. Distinct. Crossed by track. Visibly continues northward towards terminal field boundary [F20] above quarried edge but lost below encroaching peat north of track.
F13	SD 96586 98115	387	Medium cairn*, 5m diameter approximately. Isolated but close to coaxial [F12]. Undisturbed. Probable funerary cairn.
F14	SD 96538 98172	392	Coaxial field bank. Distinct north of track.
F15	SD 96474 98225	394	Fragmented. Coaxial field bank. Only visible for a very short length. May relate to substantial field bank [F19] north of quarry.
F16	SD 96396 98329	397	Short lateral bank, only visible close to the modern wall.
F17	SD 96411 98331	399	Short lateral bank, only visible close to the modern wall. Possibly just a line of quarry pits.
F18	SD96451 98347	403	Barf Quarry
F19	SD 96467 98364	408	Substantial field bank aligned NS above the Barf Quarry, undisturbed by quarrying activities.

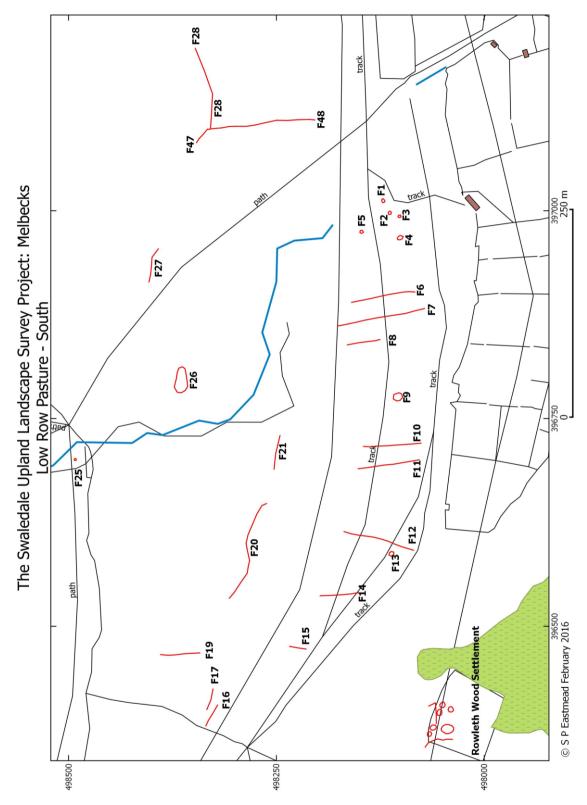
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[Feature Reference]	BNG References	Altitude (m)	Description
F20	SD 96591 98287	402	Lateral field boundary at the quarried edge (Barf Quarry)
FZU	20 30231 38281	402	assumed to be the terminal boundary to the Barff Side coaxial field system
F21	SD 96708 98253	401	Eastward continuation of [F20] the terminal boundary o
			the Low Row Coaxial Field System. This boundary continu
			beyond a quarried sandstone outcrop towards and beyor
			a prominent sheep bield.
F22	SD 96402 98667	429	Stoups Dub. Various lithic scatters at perimeter of the
	from OS map.		outcrop of the Five Yard Limestone above Stoups Dub Mi
			See also illustrations of lithic finds from these locations i
			the text.
F23	SD 96623 98604	429	Stoups Rigg Burnt Mound Site 1, uppermost of two
			conjoined burnt mounds on the eastern bank at the sam
			spring rise.
F24	SD 96630 98602	428	Stoups Rigg Burnt Mound Site 2, lower of two conjoined
			burnt mounds on the eastern bank at the same spring rise
F25	SD 96700 98495	415	Possible Funerary cairn. Isolated cairn, <4m diameter on
125	32 30,00 30-33	415	moorland near track, 50m north of the Moor Dike Wall
			marking limit of enclosed pastures.
F26	SD 96790 98367	405	Wood bank. Stone banked enclosure 27m x 15m overall
F20	10205 חבוסב חב	405	
			interpreted as once having enclosed a small copse of
E27	SD 06022 08400	402	woodland on a rocky sandstone knoll.
F27	SD 96933 98400	402	Field boundary on moorland west of dry stone sheep biel
			Quarried out where approaching the modern sheep stel
			wall from the west. Continues as [F28] eastward from th
			bield.
F28	SD 97141 98329	392	Eastward continuation of field boundary [F27] beyond
			sheep bield. See also [F47].
F29	SD 97397 98538	392	Short length of field bank commencing from the base of
			sandstone outcrop.
F30	SD 97381 98480	390	Very small cairn next track. Heavily quarried.
F31	SD 97339 98561	395	F31 Indistinct bank forming clearance edge below a low
			quarried sandstone outcrop.
F32	SD 97396 98541	392	Indistinct bank at base of quarried outcrop.
F33	SD 97195 98734	413	Field bank, eastern of two coaxial field boundaries on slop
			formed by the Five Yard Limestone. On moorland slope,
			east of Brownsey House Fields.
F34	SD 97194 98711	413	Field boundary, western of the two coaxial boundaries
-			recorded here.
F35	SD 97149 98695	412	Visible line of seasonal spring stream on Five Yard
			Limestone.
F36	SD 97131 98680	411	Visible line of seasonal spring stream on Five Yard
1.50	55 57 151 50000	711	Limestone.
F37	SD 97071 98623	408	Burnt Mound, 6m diameter. The upper and larger of two
	55 5707 1 50023		burnt mounds on opposing banks below the spring rise ea
			of Brownsey House Fields. Spring now managed as a wate
			supply.
E20	SD 07095 09633	106	
F38	SD 97085 98623	406	Burnt Mound, 3m diameter. The lower and smaller of th
			two burnt mounds here. This site is located on east bank
			the same stream below the spring rise east of Brownsey
520		400	House Fields.
F39	SD 97077 98628	408	Spring stream
F40	SD 97068 98625	409	Spring Rise. Lithic find above this spring at SD97065 9863
F41	SD 96882 98839	447	Portal of the Brownsey Level
F42	SD 96877 98820	440	The Brownsey Level Spoil Heap which is mainly compose
			of fragments of Main Limestone, some chert and much
		1	shale.

[Feature Reference]	BNG References	Altitude (m)	Description
F43	SD 96876 98797	434	Ovoid ring bank which may, in part, be overlain by the Brownsey Level Spoil Heap. This ring bank together with three peripheral features, is interpreted as a possible ring cairn of Bronze Age Date. The main ovoid ring bank measures 16m x 12m. overall and is defined by contiguous earth-fast rocks set within a low stone dump bank. Three small peripheral curvilinear enclosures are visible on Figure: 90 taken from the top of the spoil heap.
F44, F45	SD 96883 98804	435	Two small stone curvilinear enclosure features (two of the three similar features visible on northern periphery of the ovoid ring bank.
F46	SD 96875 98804	436	Small stone cairn feature 3m diameter at centre of the Ring Cairn F43.
F47	SD 96876 98797	434	Field Bank Continuation of [F28] boundary eastward from the Sheep Stell.
F48	SD 97088 98344	395	Field boundary which runs southward from below quarried sandstone outcrop and field bank [F47], to the quarried sandstone edge.
F50	SD 97543 98407	381	Green Sike unoccupied farm. [F50] is just off (Figure: 54) and is 590m due east of [F27].
F51	SD 96990 98711	422	Brownsey House and enclosed pastures.
n/a	SD 96382 98057	339	Rowleth Settlement Centre

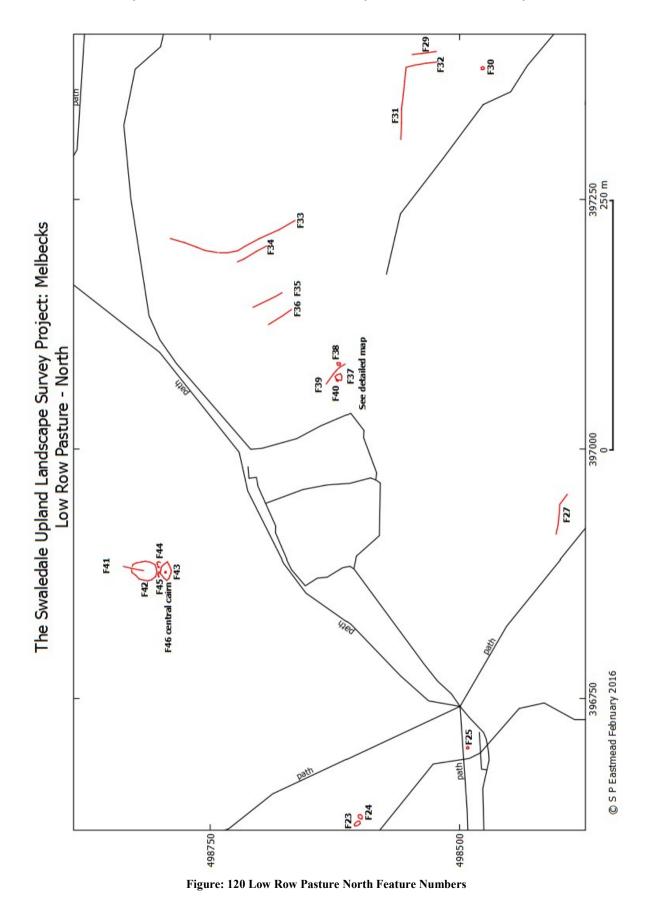


5.13 Low Row Pasture and Brownsey Moor Full Page Feature Maps



Chapter 5: Low Row Pasture and Brownsey Moor5.1 The Area Surveyed

Figure: 119 Low Row Pasture South Feature Numbers



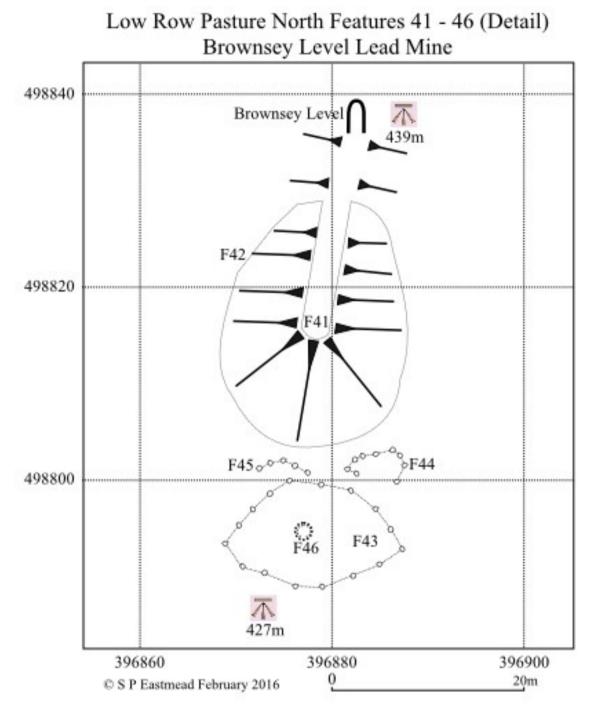


Figure: 121 Brownsey Level Mine and Archaeology.

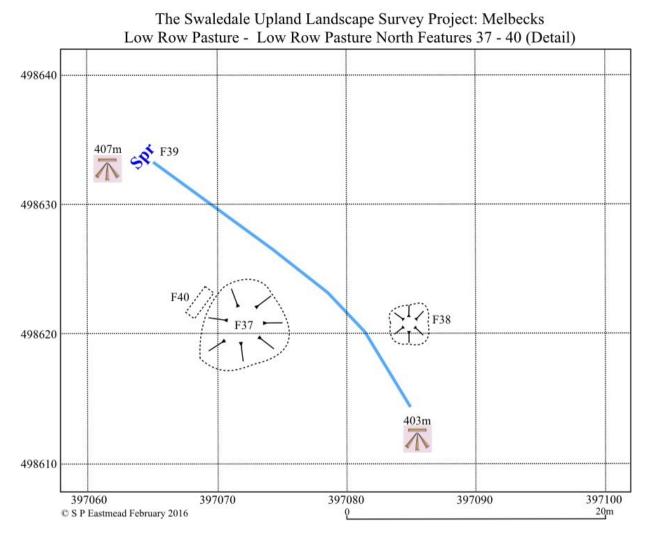
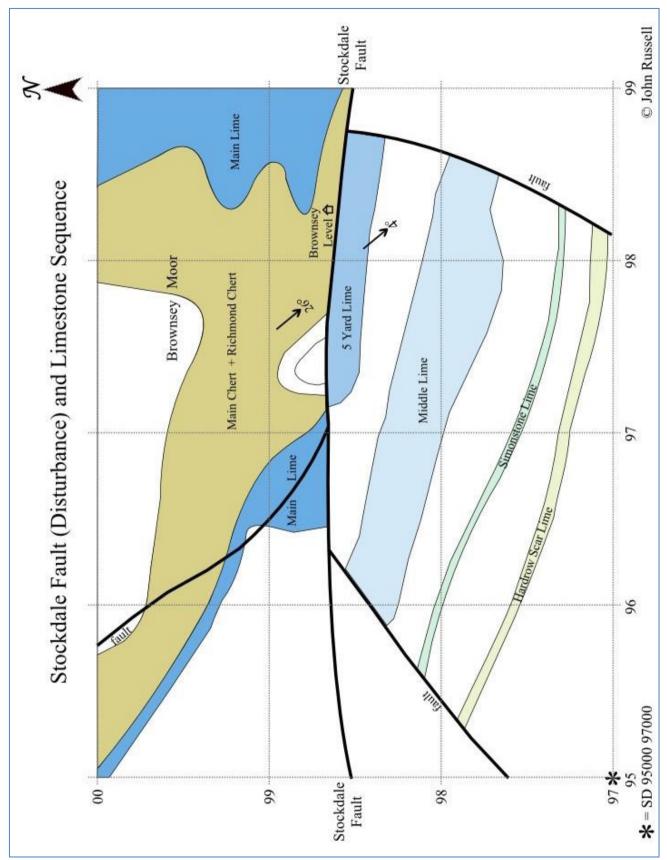


Figure: 122 Low Row Pasture North Features F37 – F40 Detail.



Chapter 5: Low Row Pasture and Brownsey Moor5.1 The Area Surveyed

Figure: 123 Stockdale Disturbance.

6.1 Introduction and Survey area extent

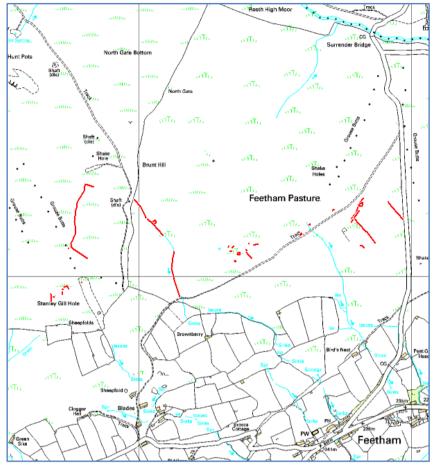


Figure: 124 Feetham Pasture OS Location Map



Figure: 125 Ancient boundary (F10) above Brunt's Hill on Brownsey Moor with a view through Swaledale

The Feetham Pasture survey is the most easterly of the four surveys. It commences at Stanley Gill Hole and extends eastwards across Feetham Pasture before terminating at the unfenced road from Low Row to Surrender Bridge.

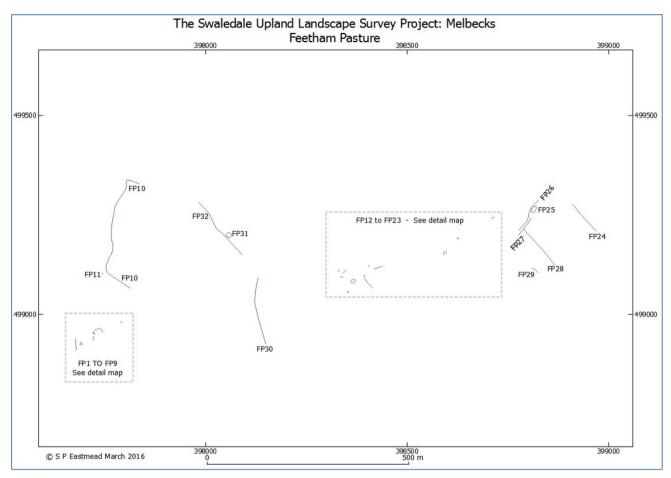


Figure: 126 Brownsey Moor End, Brunt Hill and Feetham Pasture Survey.

The first features to be surveyed within this area, [F1–F8], are the small cairns and the fragmentary field banks which together form the remains of a small cairnfield type settlement complex of Bronze Age character. This settlement of Bronze Age affinities is located on a south facing moorland terrace high above Brownsey House.

The survey continues with the recording of a very substantial field boundary [FP10] which reaches its limit at an elevation of 490m on the top edge of Brunt Hill (Figures 125 & 127).

A very small Lead Bale [FP11] was recorded at the top edge of Brunt Hill

The survey continued across Brunt Hill to include an Unenclosed Roundhouse Settlement and a large round cairn of Bronze Age character located in thick heather to the north of the track which traverses Feetham Pasture [FP12–23].

The survey of early settlement remains at Feetham Pasture was completed by recording a further unenclosed roundhouse



Figure: 127 Ancient boundary at Brownsey Moor End under survey.

settlement and associated field system [FP24–29]. This settlement is located at slightly lower elevation on the rough grassland pasture below the track which follows the lower edge of the heather moor.

Finally, ruined farmsteads at Brownberry are photographed (Figures: 114 & 115) to provide a glimpse of the homesteads of the Miner Farmers who contributed so much to the historic landscapes of Swaledale during the 16th C to 19th C.

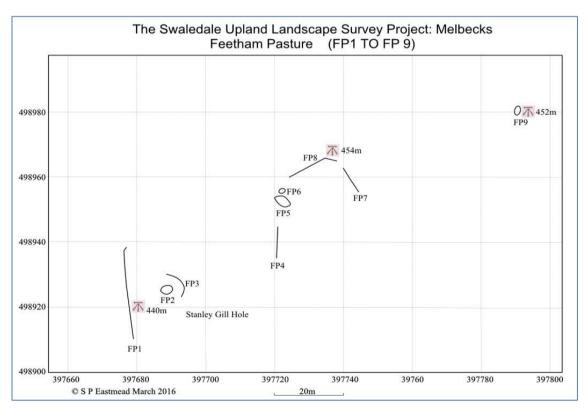


Figure: 128 FP1–FP9 Cairnfield settlement on Brownsey Moor. The remains of this small upland settlement are located on a small terrace on the uppermost south facing slopes of Brownsey Moor.

6.2 Feetham Pasture Archaeological Evidence

6.2.1 Lithic finds

In contrast to the numerous finds of flint and chert from Low Row Pasture detailed in Chapter 5, no lithic finds have been recorded to date from Feetham Pasture, Brunts Hill and Brownsey Moor End.

6.2.2 Bronze Age remains

No absolute dates have been obtained from the sites attributed to the Bronze Age which are detailed here. The high elevation features described have been recorded as being of Bronze Age character. These are the remnants of settlements which conform in all respects to settlements excavated and radiocarbon dated to the Second Millennium BC elsewhere throughout Northern Upland Britain.

References:

1. A. F. Harding, 1994. op. cit.

2. D. Coggins and K.J. Fairless, 1984. Op. cit.

Remnants of Bronze Age settlements survive at the three locations in the Survey Area outlined previously, as follows. The fragmentary remnants comprise:

- [FP1–FP9] Cairnfield settlement on Brownsey Moor, south slope above Staney Gill Hole.
- [FP2, FP5 & FP6] Small stone cairns which may occasionally cover burials
- [FP1, FP3, FP4, FP7 & FP8] Stone dump field banks of differing length
- [FP9] is a small stone cairn or grouse feeding station of recent date at the edge of Staney Gill Hole
- [FP10, FP30 & FP32] Ancient intake boundaries on Brownsey Moor End above Brunt Hill, (Figures 125, 126 & 131-134).



Figure: 129 [FP13] Remnant of 12m diameter round cairn quarried down to ground level. The earth fast stone outline of this once large cairn survives. The substantial field boundary (FP10) which rises from the upper slopes of Brunt Hill to reach an elevation of 490m.

The surveys record the uppermost length of a substantial stone dump field intake boundary bank which rises from Brunt Hill to attain an elevation of 490m on the high moorland plateau at Brownsey Moor End.

This intake bank is clearly visible where heather has been burnt but is difficult to follow on the steep slopes leading down from the high moor. The intake bank turns sharply at both ends to continue downslope from the high moorland plateau. Above Staney Gill Hole this boundary turns to descend the steep rocky slope on the eastern side of Staney Gill Hole towards the present enclosed pastures. High above Brunts Hill, the boundary turns to descend over Brunts Hill to pass within a few metres of a large burnt mound [F31] located at the spring rise of a small stream which flows towards Feetham Pasture (Figures: 131-134).

The full extent and associations of this boundary which continues down towards Feetham Pasture across the very steep uppermost slopes of Brunt Hill, could not be determined with certainty during the survey due to the steep heather covered slope and from quarrying of the bank close to modern walls.

Google Earth Imagery indicates that this boundary continues down slope to cross the lower moorland slopes of Brunt Hill. The intake boundary may be associated with the two unenclosed settlements recorded on Feetham Pasture. The upper and more northerly of these being Feetham Pasture North. [FP12–FP23] which is located on the lower heather covered slopes of Brunt Hill. The lower being Feetham Pasture South, [FP24–FP29] which is located on rough grassland below the track which traverses Feetham Pasture at lower elevation.

[FP12–23] Brunt Hill. Unenclosed roundhouse settlement complex of Bronze Age character (Figures: 130 & 131) with a large burnt mound, [FP 31] (Figures: 131-134).

The fragmented remains shown on (Figures: 126 & 138) below are those recognisable within areas of recently burnt rough heather moorland immediately north of the track which traverses Feetham Pasture. Further settlement remains in areas of thick un-burnt heather north of this track surely remain to be discovered later.

The fragmentary remnants of this upland settlement complex are centred on the remnant of a large stone prehistoric cairn [FP13] which measured 12m x 11.3m in diameter. This round cairn has been reduced by quarrying down to ground level.

These remains comprise:

- [FP12, 17 & 18] Small stone cairns which may cover burials.
- [FP13] A large round cairn, remnant 12m x 11.3m in diameter. This round cairn has been quarried down to ground level. (Figure: 108)
- [FP14, FP15, FP16, FP19 & FP20] fragmentary field system with isolated stone dump field banks of differing length. Only recorded where visible where heather has been burnt at the date of the survey.
- [FP21] Stone dump hut circle 7m diameter in heather close to modern track.
- [FP23] Rear scarp of a second hut circle also in heather.
- [FP31] Brunt Hill. Burnt mound at spring rise. See (Figures 110-113) and the Survey Plan. This boundary is thought to continue beside the small stream below Burnt Mound [FP31]. Alternatively, the bank of the small stream may just be recent clearance of the stream to improve drainage.



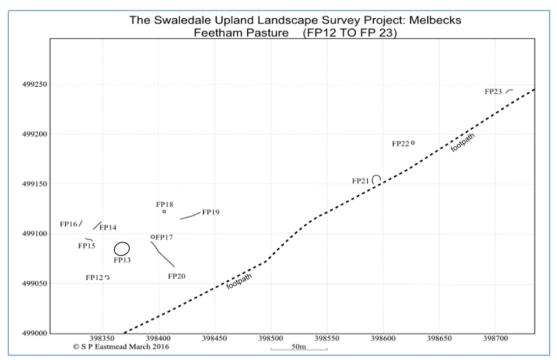


Figure: 130 Feetham Pasture North. FP12–FP23. Unenclosed Settlement remains.



Figure: 131 Brunt Hill Burnt Mound at spring rise. Viewed eastwards across the lower slopes of Brunt Hill. The vegetated burnt mound contrasts with the moorland vegetation.

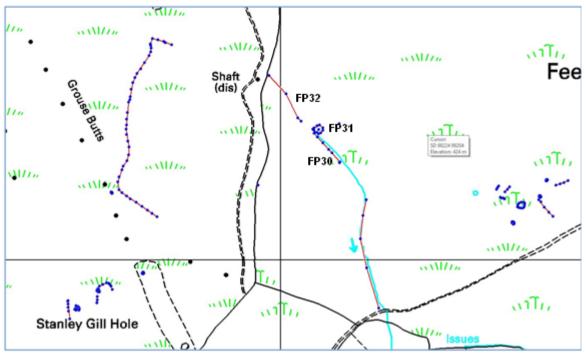


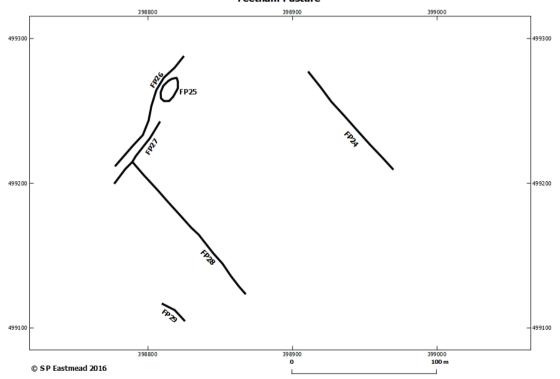
Figure: 132 Burnt mound at spring rise on Brunts Hill. (Tim Laurie: additional survey data features: [FP30–FP32])



Figure: 133 Brunt Hill, the Burnt Mound located at the spring rise.



Figure: 134 Brunt Hill. The core of the Burnt Mound. Burnt stone is visible where the burnt mound has eroded.



The Swaledale Upland Landscape Survey Project: Melbecks Feetham Pasture

Figure: 135 Feetham Pasture Features [FP24–FP29].

These features represent a single phase unenclosed roundhouse settlement located on the slightly more favourable rough grassland pasture directly below the edge of the heather moorland.

This settlement complex comprises:

A substantial ovoid roundhouse enclosure [FP25] located at the top edge of a small fragmentary coaxial field system [FP24 & FP26–29]. The field banks are slight and difficult to follow when masked below vegetation. Any gaps may have been fence lines and have left no surface trace.

6.3 Feetham Pasture Gazetteer of Archaeological Features

Cairns of any dimensions marked with an asterisk* are significant and may contain burials. These cairns are false crested or aligned at viewpoints, kerbed or otherwise constructed with care.

[Feature Reference]	BNG References	Altitude (m)	Description
FP1	SD 97677 98930	447	Brownsey Moor South Terrace. High elevation cairnfield type settlement.
			Field bank
FP2	SD 97688 98929	448	Small cairn
FP3	SD 97693 98930	449	Curving field bank
FP4	SD 97717 98941	453	Field bank fragmentary
FP5	SD 97722 98957	455	Rectangular cairn 4m x 2m
FP6	SD 97722 98957	457	Small cairn adjacent last
FP7	SD 97742 98962	457	Clearance Edge
FP8	SD 97734 98969	459	Field bank
FP9	SD 97791 98983	458	Recent cairn at edge of
FP10	SD 97767 99228	489	Substantial boundary
FP11	SD 97744 99105	477	Lead Bale
FP12	SD 98352 99061	404	Recent cairn 4m diameter at top edge of Staney Gill Hole
FP13	SD 98365 99087	406	Remnant of very large round cairn* 12m diameter approximately. All larger
			rocks and facing stones removed by quarrying.
FP14	SD 98345 99110	411	Clearance bank
FP15	SD 98336 99097	410	Clearance bank
FP16	SD 98330 99113	412	Clearance bank
FP17	SD 98393 99101	405	Small cairn* undisturbed
FP18	SD 98404 99126	408	Small cairn* undisturbed
FP19	SD 98425 99119	405	Substantial field bank
FP20	SD 98398 99083	402	Substantial field bank
FP21	SD 98592 99157	392	Roundhouse 7.8m diameter
FP22	SD 98625 99194	393	Spring Rise
FP23	SD 98711 99246	389	Possible roundhouse
FP24	SD 98946 99238	365	Field boundary
FP25	SD 98813 99268	380	Ovoid stone banked enclosure 16m x 10.5m overall, probable house
			enclosure.
FP26	SD 98800 99246	380	Top dyke and northern limit of field system.
FP27	SD 98791 99221	378	Field bank
FP28	SD 98830 99172	370	Field bank
FP29	SD 98818 99114	367	Field bank fragment



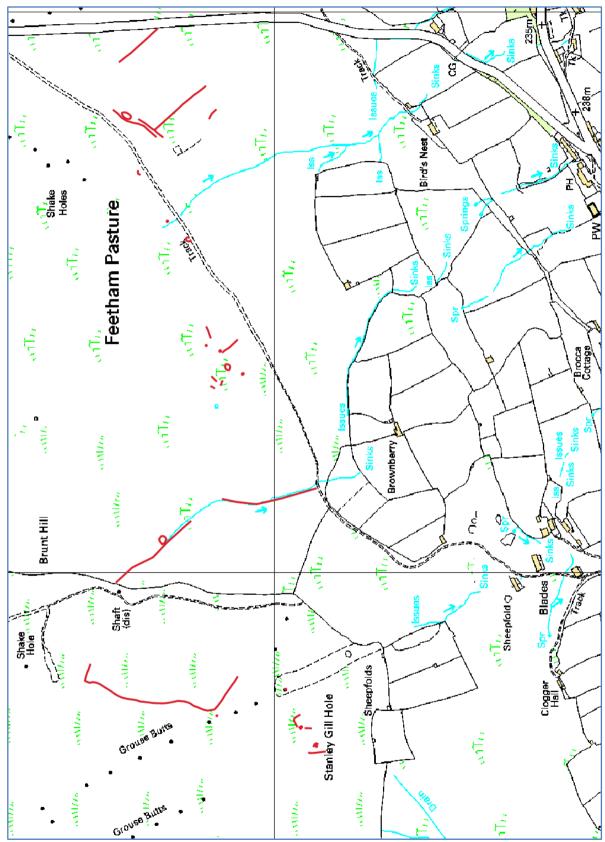


Figure: 136 Feethams Pasture (Chapter 6) Feature Numbers.

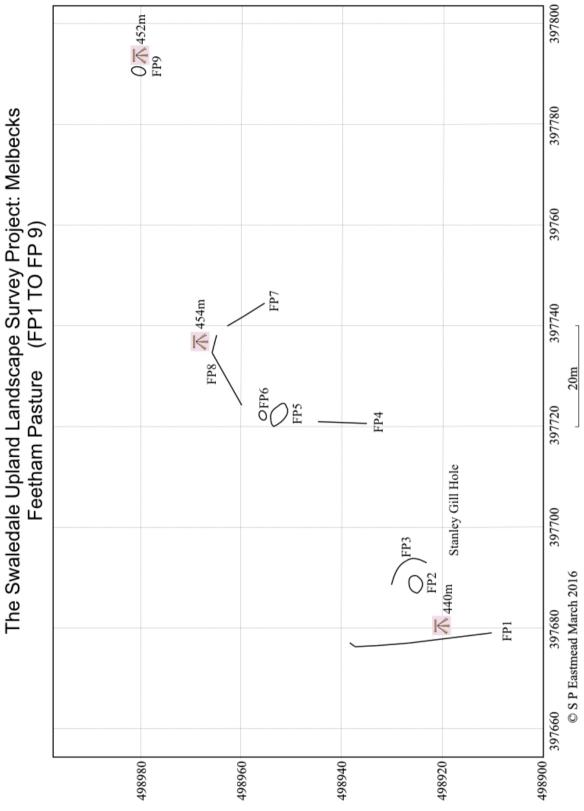


Figure: 137 Feetham Pasture FP1 – FP9

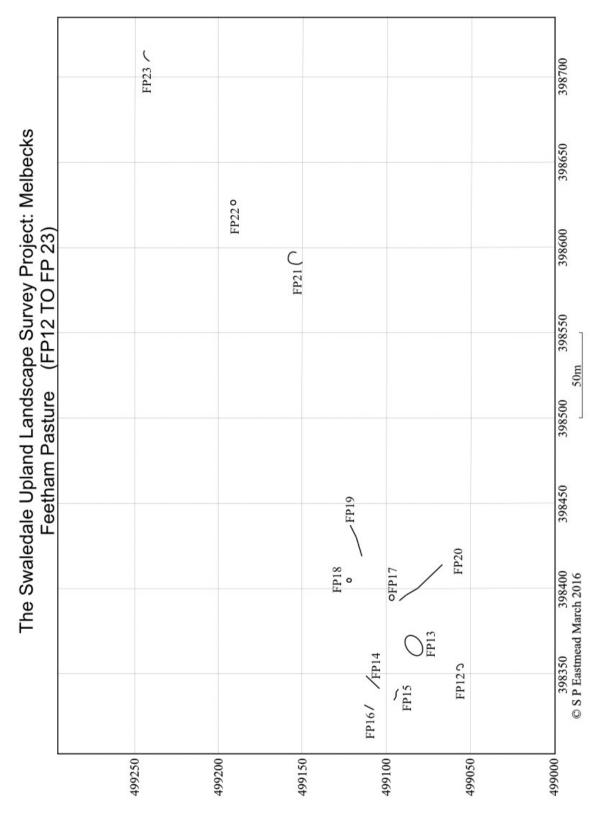


Figure: 138 Feetham Pasture FP12 – FP23

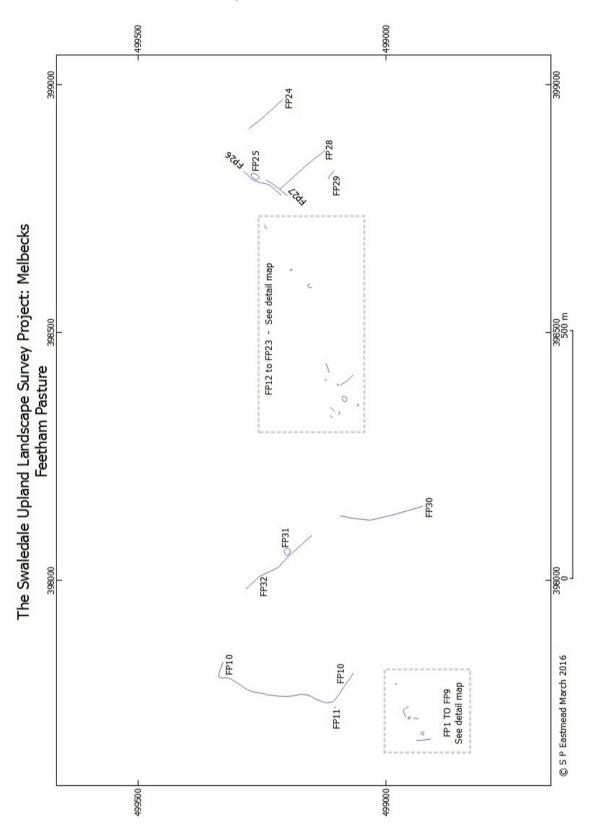


Figure: 139 Feetham Pasture Feature Numbers

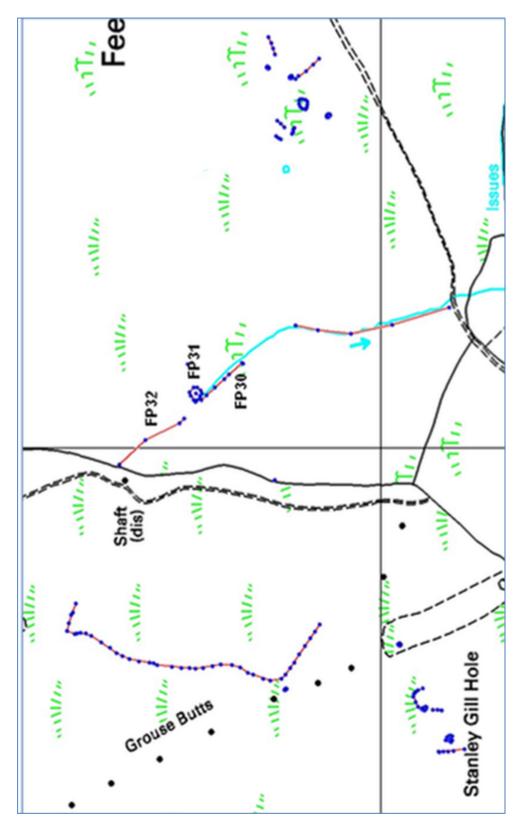


Figure: 140 Feetham Pasture FP 30 - FP32

The survey area is in the Melbecks Civil Parish. Records can be viewed online for Melbecks Civil Parish at: <u>https://swaag.org/DB_VIEW_in_Pages_FILTERED1_CP.php</u>

Below is a table of snippets from a selection of the available records. Full information and many more images are available using the above link.

Note: 'available' in the Coordinates column 2 means the coordinates are available on request from swaag.org.

Full screen images are available on the website by clicking the thumbnail images in the image column.

ID	Coordinates	Description	Image
926	SD 977 993	Isolated field boundary at 490m elevation on Brownsey Moor Top above Brunts Hill	
922	SD 98058 99198	Feetham Pasture. Brunt Hill south slope. Large burnt mound at spring rise.	

921	SD 984 991	Large round cairn (quarried remnant) and small cairnfield settlement complex on Feetham Pasture	
920	SD 977 993	Isolated field boundary at 490m elevation on Brownsey Moor Top above Brunts Hill	
919	SD 9770 9895	A small high level cairnfield settlement on Brownsey Moor	
918	SD 956 993	The Kinning Lead Mine Level spoil heaps, dressed ore dumps and bouse teams	

909	SD 97072 98625	Two probable burnt mounds located on opposing banks of the same stream just below the spring rising to the east of the enclosed fields below Brownsey House. Both burnt mounds are completely vegetated, and no eroding fire cracked stone is visible. However, these two mounds are so characteristic of burnt mounds that they will be recorded as such. Several lithic finds have been made from molehills in the open pasture immediately above the spring which confirm Later prehistoric activity probably associated with these two sites.	
757	SD 959 986	This is a probable flat-axe mould, most likely dating to the early/mid Bronze Age (based on typological similarities). It is composed of a single piece of sandstone, measuring c. 27cm x 19cm x 7cm. The stone is smoothly rounded, suggesting it has spent some considerable time in a stream or running water, prior to being carved. The mould carving measures 14cm long, and is approximately 0.75cm deep, though it is less deep at the blade end this is most likely intentional and would help to produce the cutting edge. It measures 9cm wide at the blade end, which narrows to 3cm wide at the haft end. It would have produced flat axes of a very simple design, without a hafting socket, strengthening ridges or flanges. The carving remains remarkably sharp, though has suffered some slight damage, most likely incurred as the artefact was used for walling stone. The base of the mould is not entirely smooth and would result in the derived axes needing some polishing and finishing before they could be used. The artefact was found at an isolated farmhouse, near Gunnerside, known as Barf End (SD959986). The mould weighs approximately 4.25kg, and would therefore have been reasonably portable, though given the isolated nature of its provenance, it may not have travelled very far.	

459	available	Viewed left to right: (1) a utilised chert flake with obvious bulb of percussion; (2) a patinated flint blade with both edges retouched; (3) a chert thumb scraper with retouched edge. All attributed to the Mesolithic period	
458	SD 96869 98791	A well-defined, ovoid, stone setting approx. 20m x 10m with central cairn and two short lengths of walling. Associated with the moorland field system, of probable funerary purpose and attributed to the late Bronze Age/ early Iron Age periods. The site is immediately below the much later mine level and spoil heap.	

Copyright & Acknowledgments

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The Authors

- Tim Laurie directed the Archaeological Surveys and is the author of the survey report.
- Stephen Eastmead directed the Global Positioning Surveys (GPS) consequent Geographic Information System (GIS) maps and document publication.
- John Russell assisted with the fieldwork with special reference to the relevance and accuracy of the Geological detail and report proofing.
- Survey maps, detailed survey plans and sections are copyright Stephen Eastmead unless otherwise stated.
- Photographs are copyright Tim Laurie unless otherwise stated.
- Local geology maps are copyright John Russell unless otherwise stated.
- The report is published by the three authors in 2019 under the Creative Commons Attribution 4.0 International License except where otherwise noted.

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Geology

British Geological Survey GBR BGS 1:50k Bedrock WMS GIS map 2016

Ordnance Survey 1 in 10,000 maps

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References

Bagenal Timothy, 1999, Miners and Farmers. British Mining No 62. Monograph, Northern Mine Research Society.

Bowey Keith, 2010. 'The Harden Moor Ring Cairn. An account of the excavations 1958–60, 1983–4'. In: 'Prehistoric Yorkshire' Y.A. Soc. Prehistory Section.

Coggins D, 1986. Early Settlement in Upper Teesdale, County Durham, British Archaeological Reports. 150 (Oxford).

Coggins D and Fairless K J, 1984. The Bronze Age Settlement at Bracken Rig, Upper Teesdale, Durham. Durham Archaeological Journal. 1. 5–21.

Dunham K C and Wilson A. A, 1985. B.G.S. 'Geology of the North Pennine Orefield', Volume 2: 'From Stainmore to Craven' Chapter 9, The North Swaledale Mineral Belt, Figure: 25 and page 128.

References

Eastmead Stephen, 2012. Landscape Surveying using Handheld GPS Receivers. https://www.lulu.com

Eastmead Stephen, 2018. Use of QGIS Geographical Information System in Basic Field Archaeology and LiDAR Processing. Published as a pdf download at <u>https://eastmead.com</u>

Fieldhouse R. and Jennings B., 1978 A History of Richmond & Swaledale. Phillimore.

Fleming, A. 1998. 'Swaledale. Land of the Wild River'. Edinburgh.

Gill M, 2004, Swaledale - its Mines and Smelt Mills, Landmark.

Harding, A.F. 1994 'Prehistoric and early medieval activity on Danby Rigg, North Yorkshire'. Archaeological J. 151 16–96.

Honeyman 1985 (unpublished). 'Studies in the Holocene vegetation of Wensleydale', Ph D Thesis, University of Leeds.

Innes, J. B. and Blackford, J.J. 2003. Yorkshire's Environmental Resource. in: T. G. Manby et al. (eds.), The Archaeology of Yorkshire, Yorkshire Archaeological Soc. Occ. Paper No 3.

Innes Jim, Laurie Tim and Simmons Ian, 2012. Journal of Wetland Archaeology Volume 12.

Laurie, T.C. 1985. 'Early settlement and land division on the eastern approaches to the Stainmore Pass over the Pennines.

Laurie T. C., 2004. Springs, Woods and Transhumance: Reconstructing a Pennine Landscape during Prehistory. Landscapes, 2004. Vol. 5 No 1, pp 73–102.

Laurie T. C., Mahaffey N. W. and White R.W. 2011, in R.D. Martlew, Ed. Prehistory in the Yorkshire Dales pp 37–59

Laurie, T.C. et al. 2011. 'Coaxial Field Systems in Swaledale, in: R.D. Martlew, ed. 'Prehistory in the Yorkshire Dales'. Place.

Livett (Unpublished) but detailed within Fleming, 1998, p.138. Ellerton Moor, NGR SE058984, 360m.

Lynch, F 1972. 'Ring Cairns and related monuments in Wales'. Scottish Archaeological Forum, 4 61–80.

Percy F. Kendall and Herbert E. Wroot, 1924, The Geology of Yorkshire, Private.

Smith Richard, 2006. Radiocarbon dating of early lead smelting sites. Memoirs 2006. British Mining NO 80. Northern Mine Research Society Memoirs.

Swaledale Ancient Land Boundaries Project (SWALB), Interim Reports 1–10, 1985–1994). This pollen report was obtained from 4m deep peat-infilled glacial overflow channel close to the Grinton Leyburn Road.

Turnbull Percival and Walsh Deborah, 1997. A Prehistoric ritual sequence at Oddendale near Shap. Trans. of the C. & W. A. and A. Soc. Volume XCV11, pp 11–44.

Wild. J.P. 1978. 'Cross-channel trade and the textile industry.' In J. du Plat Taylor and H. Clere (eds.) Roman shipping and trade: Britain and the Rhine Provinces. C.B.A. Report 24,79–81.