

Coaxial Field Systems in Swaledale

A Reassessment

Timothy C. Laurie, Norman W. Mahaffy, and Robert F. White.

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Introduction

The archaeological wealth of Swaledale became to be recognised in recent years, as a consequence of the aerial photographs of Robert White of the Yorkshire Dales National Park, and of the work of the Swaledale Ancient Land Boundaries Project 1984-1993 (SWALB) directed by Andrew Fleming and Tim Laurie. Andrew Fleming's book: 'Swaledale. Valley of the Wild River' (Fleming 1998) has become the standard work on the development of the landscape of Swaledale.

However, whereas ten detailed interim SWALB Reports were issued, no final report was written and the detailed conclusions of the ten year SWALB Project were in a sense left hanging. The authors aimed to address this and in the years following the work of SWALB, further fieldwork has identified the very numerous burnt mounds, interpreted here as sweat house saunas and indicators of Bronze Age transhumant settlement throughout Swaledale. Furthermore, this fieldwork has identified key details of the field systems which became clear following the annual controlled burning by the Grouse Moor Estates of areas of thick heather moorland. This additional data has formed the basis of this reassessment of the chronology of the wide ranging high level 'coaxial' field systems of Swaledale. Coaxial field systems so called, since their main boundaries are parallel or coaxial. These early field systems are so extensive that they comprise an organised landscape which required a collective design and managed construction. These coaxial field systems are located on open moorland between 300 and 430m OD and exist in close juxtaposition with evidence characteristic of Bronze Age settlement activity elsewhere in Upland Britain, namely: areas with small cairns, irregular stone walled enclosures, round house settlements, the numerous burnt mounds, ring cairns and round cairns (burial mounds) on open moorland above and beyond the dry stone walled pastures which are such a prominent feature of the landscape of Swaledale today. We describe the key relationship between the coaxial field systems and these Bronze Age settlements and conclude that the high field systems of Swaledale developed from Bronze Age settlement cores. Large areas with settlement evidence remain unsurveyed, especially areas of the lower dale slopes within the present day walled pastures, see figure 1. The recently

formed Swaledale and Arkengarthdale Archaeological Group (www.swaag.org) is actively engaged in the mapping of settlements and field systems of Late Iron Age and Romano British date on the lower dale sides at Fremington and Healaugh. In very few instances, we have been able to observe that later settlement enclosures overlie the coaxial field systems and that field boundaries associated with later settlements abut but do not cross the earlier coaxial field boundaries. These key relationships indicate that the coaxial field boundaries were still recognisable features, perhaps as remnant hedges during the period of Roman Occupation when settlements were established on the lower dale slopes just above the Swale Flood Plain.

Notes on the maps and fieldwork.

This reassessment is confined to the coaxial field systems on open heather moorland. With a few exceptions, settlements within the present day enclosed walled pastures have not yet been surveyed.

All the area maps (*except Figures 10, 11 and 12: Skelton Moor which are digitised versions of Laurie 1985, Figure 8.5*) are digitised and updated versions of surveys completed under the Swaledale Ancient Land Boundaries Project (SWALB. Fleming and Laurie 1983-1994) and have of necessity been reproduced here at small scale to accommodate the very large areas of the field systems. Critical structural details of the field systems are drawn at a larger scale on the Key Location Maps.

Key Location Maps are designed to show field relationships that the coaxial field boundaries share with structures of different periods in order to demonstrate the relative chronology of the coaxial field systems.

The principal author, Tim Laurie, is responsible for most of the field work and ideas in this paper, building on his work with Andrew Fleming as part of the Swaledale Ancient Land Boundaries Project which was sponsored by the Yorkshire Dales National Park Authority. A number of field surveyors were involved in the SWALB Project, in particular Tom Gledhill, Ros Nichol, Tom Godfrey, Par Connelid and Catherina Mascher. Our debt to the project team is acknowledged. The continuation of this field work, especially the development of a detailed gazetteer of features for the YDNPA Historic Environment Record (HER), and the preparation of this paper has been encouraged and assisted by Robert White in his role as Senior Conservation Archaeologist for the YDNPA. The detailed maps are the work of Norman Mahaffy who has also assisted in the post-SWALB fieldwork.

1 Coaxial Field Systems in Swaledale - A Reassessment.

1.1 Summary

Beneath and beyond the limit, at around 300m OD, of the present day dry-stone walled pastures of Swaledale in the vicinity of Reeth, exists an earlier organised landscape of fields with boundaries which share a common, i.e. parallel, axis, see Figure 1. South of the River Swale, these field systems sharing a NNE-SSW axis, reach altitudes of 410m at How Hill on Grinton Moor and 380m on Harkerside Moor. North of the Swale, on Reeth Low Moor coaxial field systems extend from Fore Gill Gate eastward to the Arkengarthdale Road reaching an upper limit at around 400m OD on the south facing slopes of Cringley Hill and Calver Hill. The Marrick Moor coaxial field system, also on a NNE-SSW axis, extends from Fremington Edge at 420m OD across Copperthwaite and Raygill Allotments reaching an unenclosed settlement in the pastures at Lower Stelling east of the Hurst Road. Eastward from Stelling Beck, in Marske Parish, the Skelton Moor Field System crosses Forty Acres, Cleaburn Pasture and Cock How Allotments on the same axis, reaching Moor House Gill and Munn End on Skelton Moor above Telfit Bank (Photo 1).

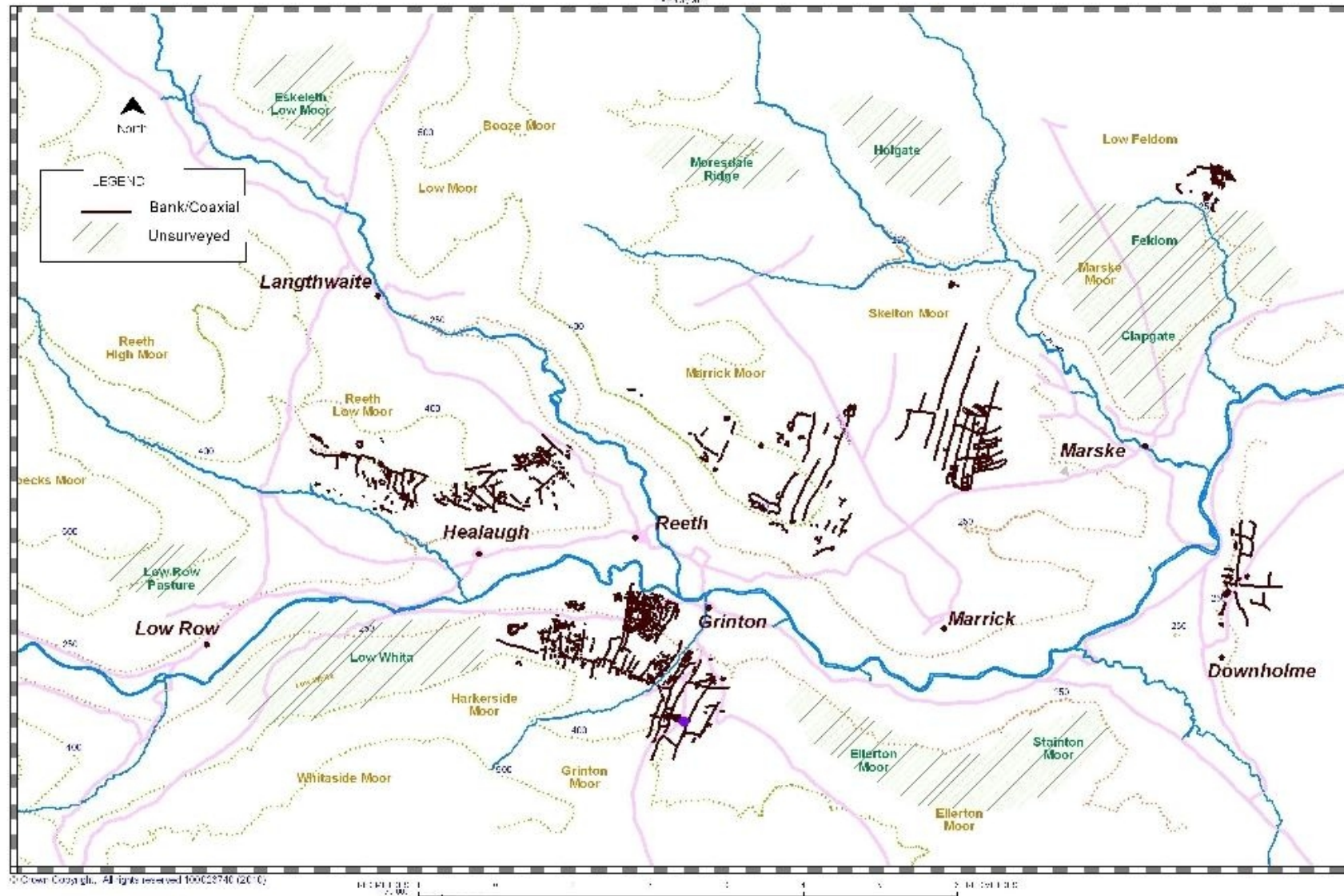


Figure 1: Swaledale. Coaxial field systems.



Photo 1: Reeth and Upper Swaledale from Reels Head

All these field systems have been described previously (Laurie 1985, Fleming and Laurie 1984-1993, Fleming 1998) but accompanying survey maps and analysis have been selective. Subsequent fieldwork following heather burning has revealed much detail, including the existence of unenclosed settlements, numerous burnt mounds and other critical structural associations, not previously noted. This detail allows the development and relative chronology of the field systems to be reassessed. The maps presented here use all available sources including satellite imagery. YDNPA HER records based on aerial photography show all these field systems, however critical relationships can only be confirmed on the ground.

Although no final report on the SWALB Project has been published, ten interim reports were issued to the YDNPA who co-funded the project. In the absence of a final report, the chronology of the field systems and the relative chronology of the complex landscapes on the moors above Reeth have been left hanging and a number of issues remain to be addressed.

First, the coaxial fields were imposed upon a landscape which had already been modified by Bronze Age unenclosed cairnfield settlement activity. The possibility had yet to be determined that the coaxial field systems were associated, i.e. had developed from, this Bronze Age settlement horizon so widespread throughout Swaledale - as has been clearly demonstrated for the coaxial field systems of the East Moors of the Derbyshire Peak District (Barnatt, J. 1987).

Secondly, whereas it could be construed / inferred that the very numerous platform settlements on the lower dale sides were associated at least with the final phases of development of the coaxial field systems of the high moorland, no such direct association had been demonstrated.

Thirdly, no discussion was available to explain the motivation for the construction of the planned landscapes which these coaxial field systems represent. Neither has any attempt been made to ask who made them.

Work on the development of the detailed gazetteer of features for the YDNPA Historic Environment Record (HER) is well advanced and this work continues.

2 Previous archaeological work on field systems in Swaledale, the nature of the evidence.

The co-axial field systems and cairnfields on open moorland in the vicinity of Reeth in Swaledale were first introduced to a national audience by the writer at the Newcastle conference, *'Upland Settlement during the Second Millennium BC and after'*, and described in the published proceedings (Laurie, in Spratt and Burgess 1985). The coaxial field systems of Mid-Upper Swaledale, although undated, were at that time considered to be comparable in scale and morphology to those above Grassington in Wharfedale (Raistrick 1935). By the best of fortune Andrew Fleming, then Senior Lecturer at The University of Sheffield, was at this time completing his Dartmoor Reaves Project (Fleming 1988). Similarly, Seamus Caulfield had surveyed and dated the extensive sub-peat co-axial field systems at Belderg Beg, on the west coast of Ireland in Co. Mayo to the Neolithic (Caulfield 1983).

Thus, in the early 1980s coaxial field systems were beginning to be recognised and the problems imposed by the very different chronologies and sometimes complex development of these extensive early organised landscapes throughout Britain were of considerable academic interest. At the Upland Settlement conference, Andrew Fleming proposed to the writer a project to complete the reconnaissance and survey of the coaxial field systems in Swaledale and to determine their chronology.

During the course of ten years fieldwork between 1984 and 1993, the coaxial field systems on open moorland generally above 300m OD on Reeth Low Moor, on Marrick Moor, on Grinton Moor and on Harkerside Moor were mapped by EDM theodolite at a scale of 1:2000. Limited excavations on Reeth Low Moor indicated that the main Phase 2 coaxial field system here was constructed at around 300BC. At a late stage in this work, the extensive zones of later, Romano-British settlements within the walled pastures on the lower dale sides was recognised and in part surveyed (Fleming 1998, figs 1.5, 9.6 and 9.7).

The excavation of a single house platform, one of a group of six similar platforms ***located within a contemporary lynched field system*** on the steep dale side east of Healaugh revealed four separate structural phases, with evidence for occupation extending from the Late Iron Age to the period of Roman occupation (Fleming 1998, 133-153).

SWALB surveys also included the outlying cairnfield type settlement complex at the White Bog, on the Stainton Moor army ranges (Fleming 1998, fig 8.3) surveyed as an example of a single period cairnfield settlement of Bronze Age character. The environmental history of the upper dale slopes was examined through pollen analysis of a column taken from deep peat within an overflow channel on Ellerton Moor (Fleming 1988, 138-40).

Subsequent to the SWALB Project substantial archaeological surveys of areas of high archaeological interest on the Catterick and Feldon Ranges have been commissioned by Defence Estates. These surveys cover the recently recognised deserted medieval village

and prehistoric settlement at Low Feldom Farm, the settlements and field system of late prehistoric character on Downholme Moor and the defended settlement on How Hill, Downholme.

Fleming (1998) outlined the SWALB Project and included maps and comments on selected aspects of the coaxial field systems and dale side settlement so it will not be described further here. However, the only publication describing the early field systems of Swaledale in total in context with the evidence further north on the Tees / Greta Uplands including Stainmore remains the introductory account following their initial recognition (Laurie 1985). Fleming acknowledged the requirement to ‘finish what we started’ (1998, 153) and it is hoped that this reassessment will, together with the updated plans, in some measure progress this.

The purpose here is the reassessment of the coaxial field systems of Swaledale in the light of further fieldwork and the placing on record the full extent of these organised early landscapes as currently surveyed. Figure 1 shows the coaxial boundaries on open moorland, in the vicinity of Reeth. Each area with coaxial fields is separately described below. Areas with evidence of early settlement in Swaledale which have not yet been surveyed are also indicated on Figure 1; these further areas will be the subject of targeted survey by the recently formed Swaledale and Arkengarthdale Archaeological Group, SWAAG, <http://www.swaag.org/> affiliated to the Friends of the Swaledale Museum at Reeth. Late prehistoric settlements within the lower enclosed walled pastures are noted but detailed consideration of these sites is beyond the scope of this article.

All areas with early field systems in Swaledale show evidence for development over a very lengthy period, that is to say they possess chronological depth. This evidence can be **stratigraphic**, where field systems are abandoned and reconstructed across the same ground but on a different axis, **by lateral enlargement** where field systems are extended from earlier settlement cores and **elevationally** where following woodland clearance, a field system is extended upslope or, downslope.

Following climatic deterioration and podsolisation perhaps, the field systems on the high moors were abandoned and settlement retreated downslope to occupy the lower dale side walled pastures of today. Close examination of the relationships that exist within the boundary systems and of those of the boundaries and pre-existing structures reveals complex development and occupation over very long periods of time.

At the most elementary level of observation the construction of the field boundary banks implies a very lengthy period of use. The coaxial boundaries are low stone banks which appear to be of dump construction (with occasional revetting or facing stones) having accrued through time by field clearance. Typically, the banks are highly consolidated and of substantial dimensions. They measure

approximately 1m to 3m wide, averaging around 1.2m in width and perhaps 0.75m in height on section. These boundaries are interpreted as relict hedge banks which provided a real barrier to contain and control stock. This interpretation is supported by the fact that, where recognisable, gateways are offset 3 to 4m for a length of 15m to provide a lead-in for animals to the gate.

Within the coaxial field systems are found examples of most of the features characteristic of unenclosed Bronze Age cairnfield settlements throughout upland Britain, for example see Barnatt 1987, namely isolated large cairns, groups of small cairns, burnt mounds, curvilinear enclosures, occasional lithic scatters, irregular paddock like fields, cultivation terraces, house platforms, round houses, ring cairns, cup and cup and ring marked rocks, the last being limited in distribution in Swaledale (Beckensall and Laurie 1998).

We had always recognised the presence of these features but had concluded, instinctively rather than on the evidence, that the coaxial field boundaries were later constructs and intrusive to these Bronze Age settlement complexes. Work on the escarpments of the East Moors of Derbyshire, by Barnatt (1987) and more recently by the Gardom's Edge Project <http://www.gardoms-edge.group.shef.ac.uk/> has shown that settlement complexes ***dated to the Bronze Age and very similar to those described here are associated with contemporary coaxial field systems***. By analogy, the very high coaxial field systems of Swaledale, in particular the Marrick Moor system which is clearly associated with cairnfield type settlements could also have their origins in the Second Millennium BC.

Interpretation of the association of the coaxial field systems which range across the same ground as these Bronze Age cairnfield and unenclosed settlement complexes is only possible by careful survey. A single visit to any of the high heather covered moorland areas of Swaledale will not reveal the whole palimpsest of field evidence. Over many years, the principal author, T C Laurie, has noted features which are now invisible under thick heather and continues to recognise features for the first time when new areas of heather are burnt.

3 The Coaxial Field Systems.

At least three phases of settlement can be identified within the coaxial field systems of Swaledale:

The earliest of these is Phase 1, a 'cairnfield settlement' phase of Bronze Age character. This early phase can perhaps be regarded as seasonal, transhumant settlement which created the original settlement cores from which the main Phase 2 unenclosed settlements with associated coaxial field systems developed.

The Phase 2 settlements and coaxial fields are defined by very substantial stone banks representing a very long period of occupation. The development of the coaxial field systems appears to have continued through many centuries with the addition of settlement enclosures and secondary coaxial fields subtended from the main coaxial boundaries like 'washing on a line'.

Late Phase 3 settlements and field systems comprise enclosed farmstead settlements of late prehistoric and Roman date associated with relatively slight coaxial field boundaries overlying or abutting the main Phase 2 coaxials, as on Reeth Low Moor at Riddings Rigg where a late field bank has clearly quarried stone from the perimeter bank of an early Phase 1 circular enclosure (see Fleming 1998, fig 9.3).

Each area of coaxial fields in Swaledale will be described in this section with particular reference to the evidence for chronological depth, noted at Key Locations.

3.1 Grinton Moor. References are to Figure 2.

3.1.1 Description of Grinton Moor.

The coaxial field system on Grinton Moor extends westward from Cogden Gill to Grinton Gill and from the limit of the modern enclosed pastures at 250m OD south of Grinton to ascend on to the high moor plateau beyond How Hill, the escarpment formed by the Main Limestone. The coaxial fields terminate at Ridley Hush, at 410m OD, (photo 2).



Photo 2: Grinton Moor Ridley Hush

Six coaxial boundaries, form the framework to the field system which shares the same SSW-NNE axis as the large field systems across the Dale on Marrick Moor and on Skelton Moor (see below). The Grinton Moor field system is bounded by the steep ravines of Cogden Gill to the east and Grinton Gill to the west. Each of the long coaxial fields is further divided by occasional lateral banks.

The field system appears to have been open ended with no convincing top dikes to the field strips. The coaxials incorporate several stone banked enclosures, **G3-G7** on Figure 2, which, at differing elevations, may be settlement cores although convincing round houses and house platforms are not always visible.

3.1.2 Chronology of the Grinton Moor Coaxial Field System. For Key Locations, see Figure 2.

At Key location **G1**, a coaxial field boundary **abuts but does not cross** a pre-existing contouring field boundary which originates at Cogden Gill to turns down slope at **K1**. This boundary defines the limit of an open unenclosed settlement, cut by the unfenced road south of Grinton Lodge, located at Key Location **G2**. This settlement complex comprises four large round house enclosures, small cairns, irregular field banks and a single burnt mound at SE04559761, 275m OD, just 20m east of the unfenced road to Redmire. (Photo 3).

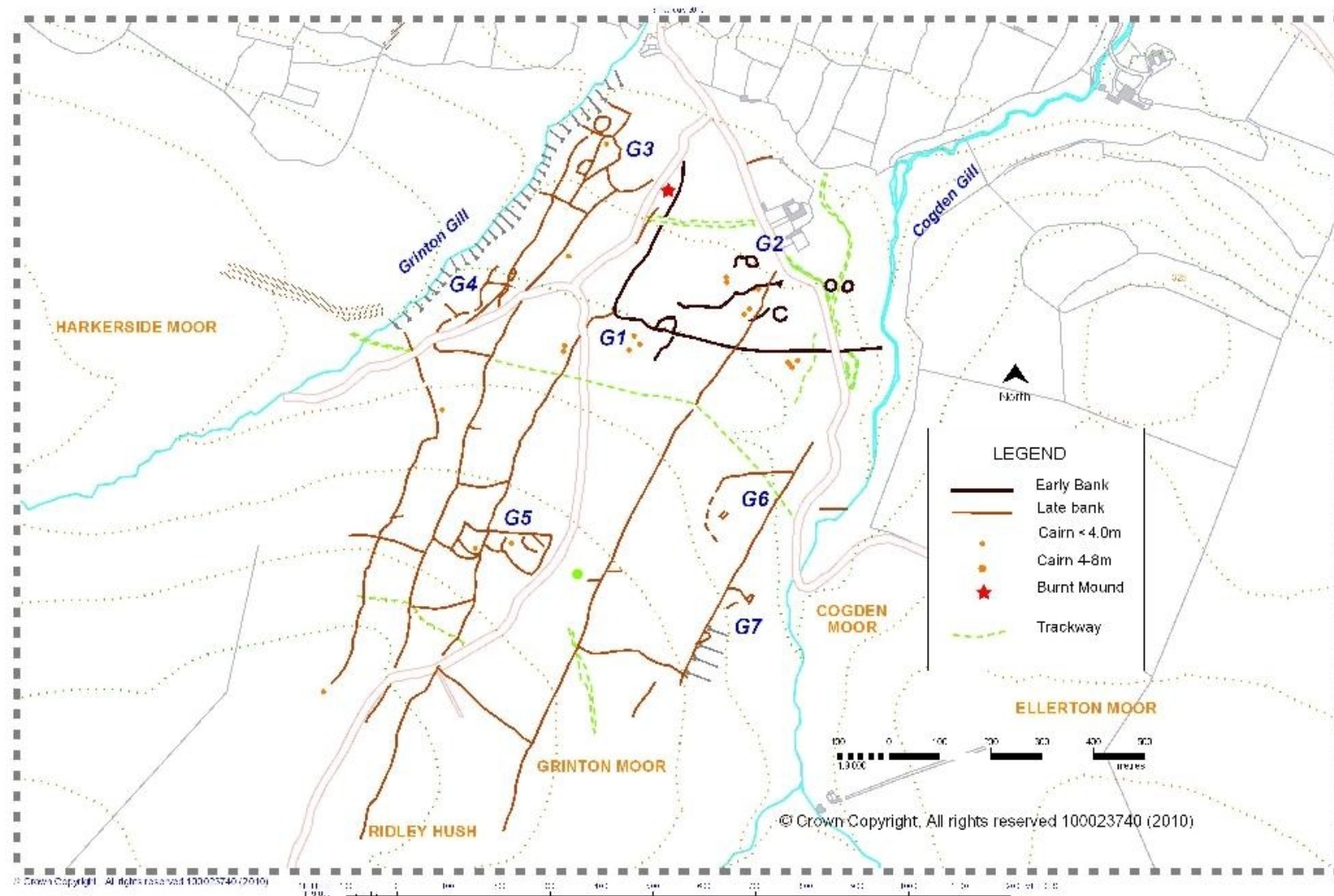


Figure 2. Grinton Moor, from Cogden Gill to Grinton Gill.



Photo 3: Grinton Moor. Round house enclosure south of Grinton Lodge Youth Hostel.

Two of the four round house enclosures which average 20m diameter overall, 14m diameter internally, were originally identified by the author as ring cairns, but following the recognition of two further enclosures masked under bracken and heather, the enclosures are reinterpreted here as large round house enclosures (for details of two excavated round house settlements see Coggins and Fairless 1984; Gates 2009).

At key location **G3**, the lowest at around 250m OD of several grouped enclosures and possible settlements, **G3-7**, on Grinton Moor includes strongly lynched boundaries implying possible reuse of the field system for later cultivation here. The coaxials and the grouped fields are centred on an ovoid embanked enclosure which underlies a recent ruined sheep fold.

3.2 Harkerside Moor References are to Figures 3, 4 and 5

3.2.1 Description of the Harkerside Coaxial Field System.

These field systems extend westward for a distance of 2km from Grinton Gill towards Maiden Castle. The whole of Harkerside Moor, from Grinton Gill to Maiden Castle is published here for the first time as Figure 3. For clarity, details of the field system from Grinton Gill to the Deer Park, Harkerside East, are shown at larger scale on Figure 4, and from Deer Park to Maiden Castle, Harkerside West, on Figure 5.

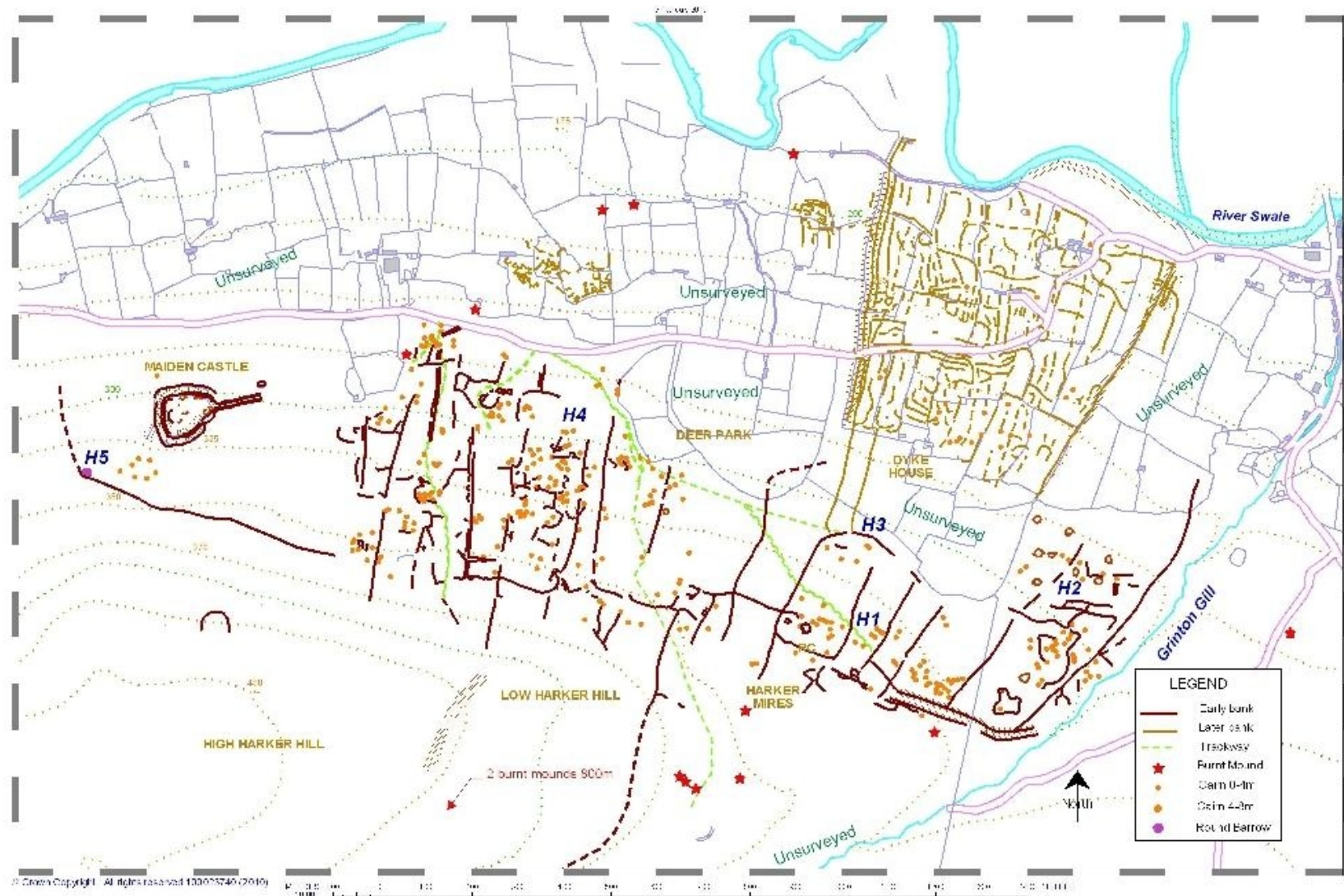


Figure 3. Harkerside Moor from Grinton Gill to Maiden Castle.

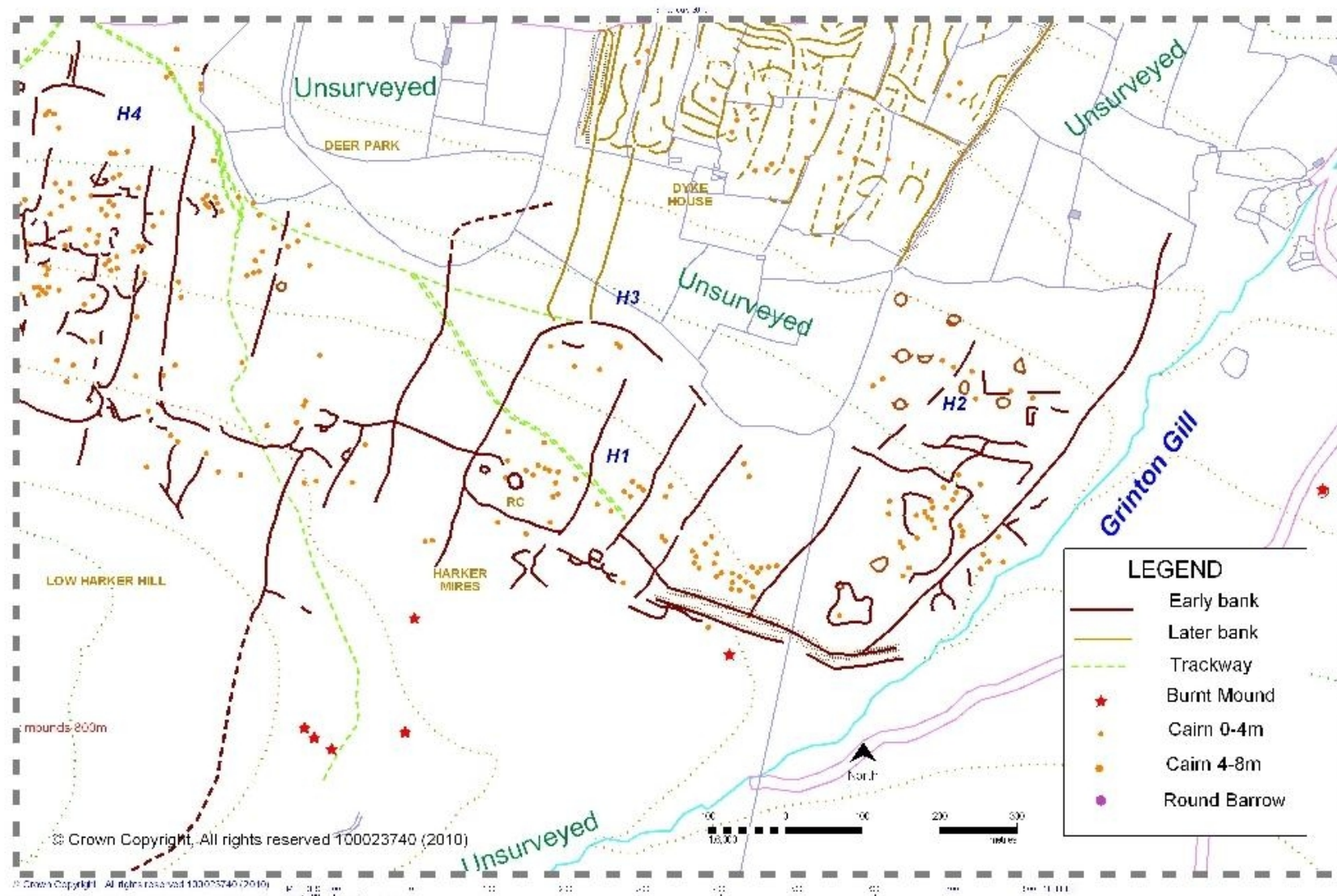


Figure 4. Harkerside East, from Grinton Gill to Deer Park

3.2.2 Harkerside Moor East.

The coaxials run at right angles to the slope from above the present walled pastures at around 300m OD to reach an elevation of 385m OD below High Harker Hill, (Photo 4 below).

The upper limit of this field system is defined by a top dike bank which runs the full length of the base of High Harker Hill. This boundary is aligned on the southern edge of the prominent round barrow located 300m west of Maiden Castle. This upper limit of the fields extends eastward towards the abrupt terminus of the linear earthwork at Harker Mires. Subsequently, a number of coaxials were extended to include additional areas of Low Harker Hill and Grovebeck Gill which is enclosed by a single boundary crossing Grovebeck at SE02909695.



Photo 4: Harkerside Moor East coaxial.

The Harkerside Moor East coaxial field system crosses rising moorland which everywhere shows extensive evidence for Bronze Age cairnfield settlement including very large numbers of clearance cairns, occasional ring cairns, and ten burnt mounds. This early settlement evidence is most concentrated at Harker Mires, Key Location **H1**, see below.

Cairnfield settlement evidence is not confined to the highest levels of Swaledale but extends down into the present day pastures of Harkerside where small cairns, irregular field banks, three burnt mounds, and the scheduled round barrow below Swale Hall testify to Bronze Age activity at lower elevations. Later, Romano-British and medieval enclosed settlements and associated fields are however restricted to the lower slopes below 300m OD.

Settlement associated with the coaxial field systems on Harkerside Moor proved difficult to identify and my view now is that the field system developed seamlessly from the earlier Bronze Age cairnfield settlement phase and is not a later intrusion on the cairnfield settlements as had been assumed.

3.2.3 Chronology of the Harkerside Moor East Field System. For Key Locations, see Figures 3, and 4.

Key location H1, Harker Mires. SE037975, centre, (Laurie 1985, fig 8.4). Here the coaxial field boundaries incorporate an extensive cairnfield centred on the prominent embanked stone circle or ring cairn at SE03539761, 340m OD which is shown as a hut circle on the OS 1:25,000 Outdoor Leisure Map, (Photo 5).



Photo 5: Harkerside Moor. Ring cairn at Harker Mires.

Laurie has always considered the Harkerside coaxial field system to be associated with this Bronze Age settlement zone on grounds that the stone circle is centrally located within the coaxial fields and the field boundaries do not obviously quarry out the clearance cairns located in their vicinity. This view is admittedly subjective and the fields could be later than the cairnfield. However, throughout Britain Bronze Age cairnfield settlements are associated with coaxial field systems, for example the cairnfield and coaxial field system at Gardoms Edge, Derbyshire. <http://www.gardoms-edge.group.shef.ac.uk/enclose.htm> Resolution must await targeted excavation and dating of sediments / soils under the field banks.

At Key Location H2, SE043977, centre, a zone of settlement has been recognised on the lower moorland slopes west of Grinton Gill. Here, cultivation terraces, small fields, house platforms, clearance cairns and a single rectangular building of some 20m in length with porched gable end entrance of early medieval form all indicate a zone of intensive multi period settlement. A coaxial boundary which descends from Harker Mires is slighted by this later cultivation. Higher upslope, north of the linear earthwork, two curvilinear enclosures with several probable round houses may prove to be early settlements contemporary with the cairnfield phase. A further circular enclosure is located west of Grovebeck at SE03549723.

At Key Location H3, at SE03569782 two later coaxial field banks abut but do not cross the boundary defining the lower limit of the Harkerside coaxial field system. These two coaxials can be traced down into the walled pastures east of the westernmost of the Grinton Fremington Dikes to the settlement at Dike House Close, that slighted by the western of the two Fremington Dikes on Harkerside considered to be of Roman or medieval date (Fleming 1998, 21).

3.3 Harkerside West.

West of Deer Park, above Harkerside Place, the coaxial field boundaries are on a slightly different alignment to those of Harkerside East and are more closely spaced. These coaxials may represent a late westward extension of the Harkerside East field system towards Maiden Castle. This area has been described previously. (Fleming 1998, fig 9.4).

3.3.1 Chronology of the Harkerside Moor West Field System. For Key Locations, see figures 3, and 5.

Key Location H4. Within the Harkerside West field system are very significant numbers of small cairns and areas of irregular field walling. These small cairnfields are evidence of early cultivation and settlement activity on almost every small terrace.

It is possible that the Harkerside West coaxial field system was associated with the settlement complex lower down at Plaintree Farm, (Fleming 1998, fig. 9.6).

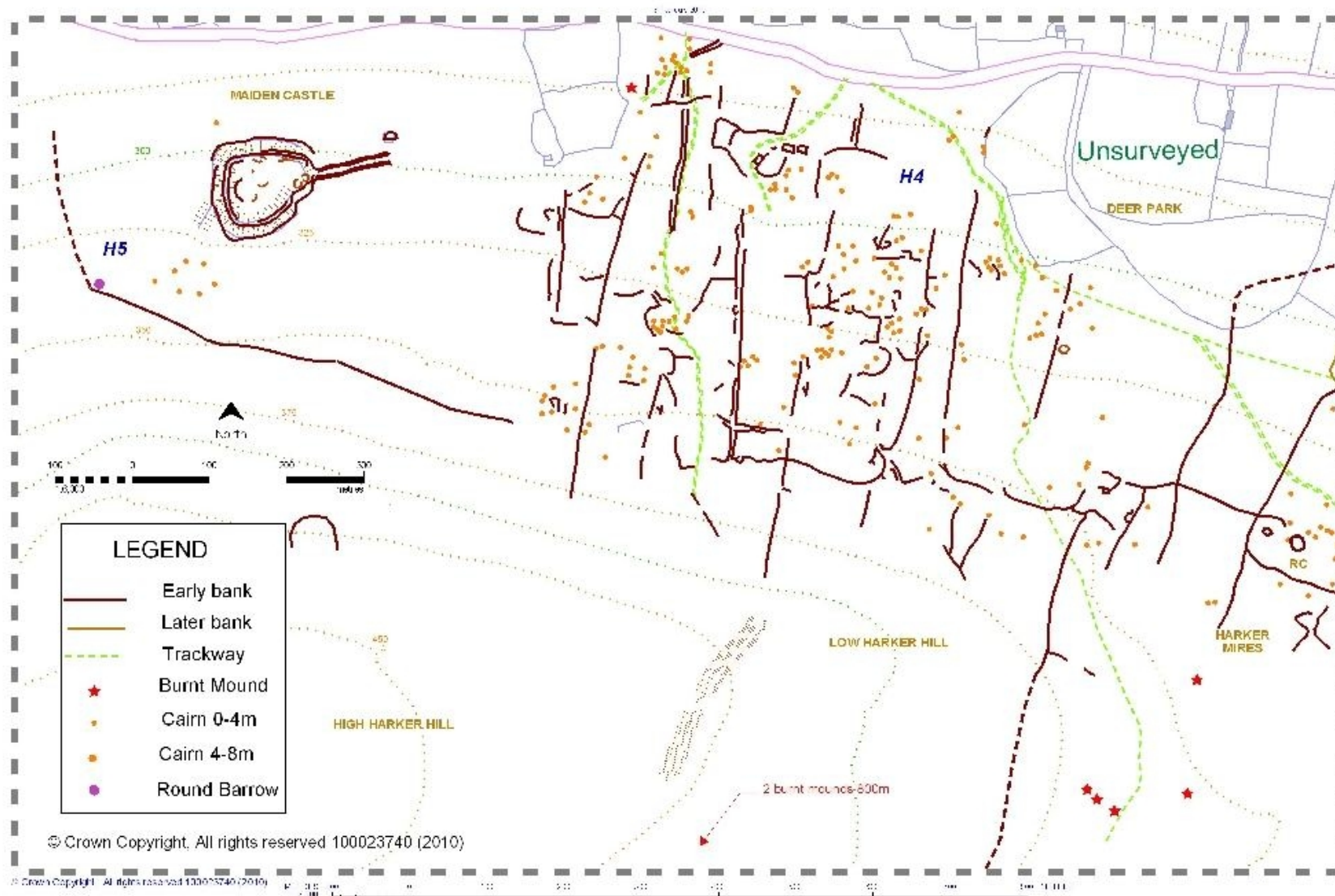


Figure 5. Harkerside West from Deer Park to Maiden Castle.

A rare farmstead settlement of early medieval type is located on moorland at 300m OD above Harkerside Place at SE02859812. This late settlement consists of three rectangular buildings with gable entrances within an enclosing yard like the excavated settlements at Ribbleshead (King 1978) and at Simey Folds (Coggins and Fairless, 1986).

Key Location H5. The boundary marking the upper limit of the Harkerside Moor field system below High Harker Hill at 340m OD extends westward to enclose the prominent oval barrow located some 200m west of the earthwork enclosure of Maiden Castle normally interpreted as an enhanced status platform settlement of Late Bronze Age or Iron Age date (Bowden and Blood 2004) although Vyner has noted similarities to henge like enclosures and postulated a Neolithic date (Vyner 2007). The western limit of the Harkerside Moor field system is some 400m east of Maiden Castle.

3.4 Two Unsurveyed Coaxial Field Systems.

The main location map, Figure 1 shows extensive areas with recognised early settlement evidence as yet unsurveyed in detail, (Photo 6). Space constraints do not allow full description of these areas, however mention must be made here of two isolated coaxial field systems west of Maiden Castle which are directly associated with prehistoric settlements. The first of these unsurveyed settlements is in the juniper woodland just 1km west of Maiden Castle (Para: 3.5). The second unsurveyed area is north of the Swale in Melbecks parish (Para: 3.6).



Photo 6: Ellerton Moor. Field system aligned on small standing stone. Three burnt mounds nearby.

3.5 Unenclosed Settlement and Coaxial Field System east of Browna Gill, Low Whita. (Unsurveyed).

This settlement comprises a group of five round houses centred at SE 01209820 located within and overgrown by juniper scrub woodland. This settlement is linked by a contouring field bank to a hill slope enclosure some 70m by 70m overall at SE01119816 with an entrance track leading downslope towards the Swale and to a group of small fields on the east side of Browna Gill. Two coaxial field boundaries, associated with this settlement of Bronze Age type (for details of excavated unenclosed settlements, see Coggins and Fairless 1984; Gates 1983; 2009), rise upslope from the east bank of Browna Gill to reach Blue Hill at 400m OD. The presence of a burnt mound at Blue Hill and lithic finds at Browna Gill is further evidence for Bronze Age activity here.

3.6 Coaxial Field System on Low Row Pasture and platform settlement at Rowleth Wood.

Within the isolated stone walled intake at the NW corner of Rowleth Wood, at SD96389805 is a settlement of six house platforms with two adjacent conjoined scooped and banked enclosures. A trackway leads upward from this settlement towards Low Row Pasture, where a coaxial field system crosses the calcareous grassland above the outcrops of the Five Yard and Three Yard Limestones to the acidic moorland over sandstone of Low Row Pasture below Stoops Rigg. This field system seems to be associated with the Rowleth Wood settlement. Within the field system on Low Row Pasture are a few small cairns and remains of a heavily reduced round cairn located at a viewpoint on a limestone pavement knoll on the southern edge of the track above Barf Side. Lithic scatters and a burnt mound at the spring head on Stoops Rigg at SDSD96649858, 425m OD complete this interesting settlement complex.

3.7 Reeth Low Moor - Calverside References are to Figures 6 and 7.

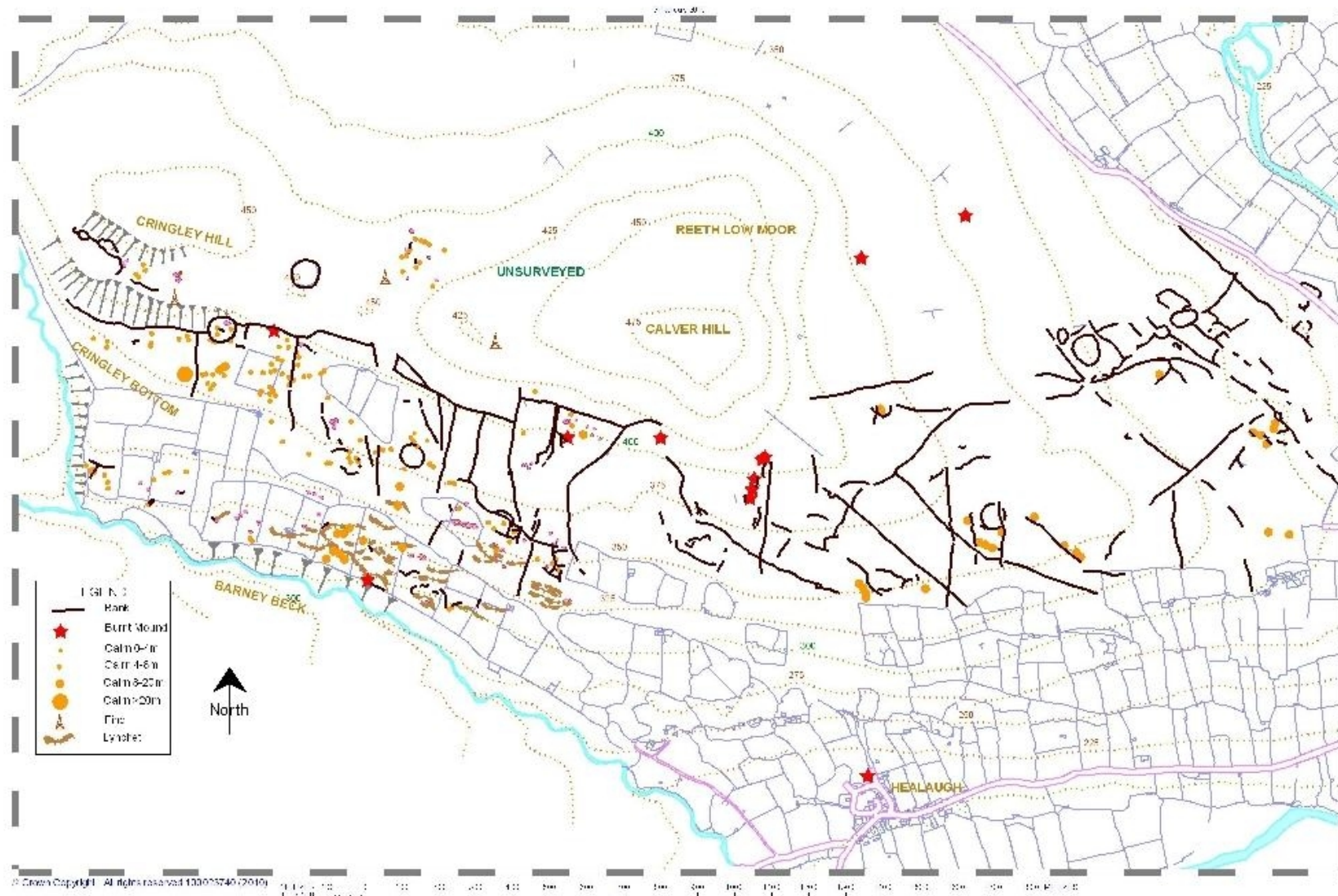


Figure 6. Reeth Low Moor and Barney Beck Pastures. See Fleming 1998 Figure 9.7 for settlements within the walled pastures East of Healaugh.

3.7.1 Description.

Coaxial field systems of considerable complexity extend across the south facing slopes of Calverside from Fore Gill Gate to the Arkengarthdale road – a distance of 3.5km crossing the south facing slopes of Cringley Hill, Calver, Riddings Rigg and Black Hill. See Figure 6.

The pre-coaxial cairnfield settlement phase is well developed on and below Cringley Hill (Figure 7). Areas with small cairns are much less frequent east of Healaugh. At least two distinct phases of coaxial field systems on Calverside have been recognised, the lower terminating at 360m OD, the upper extends across the entire south facing slopes of Cringley Hill reaching 425m OD on Calver Hill.

The coaxial field systems on the eastern slopes of Calverside, including those on Riddings Rigg, (Photo 7) and on Black Hill and the late prehistoric settlements within the pastures above and east of Healaugh have been detailed and analysed previously, (Fleming 1998, 133-153 and fig 1.5). Accordingly, this discussion will be confined to the early settlement north and west of Healaugh (see Figure 7, Calverside West) and to the settlement complex within the present day pastures above Barney Beck Woods at Low Cringley. The evidence on Calverside West is detailed here for the first time.

3.8 Reeth Low Moor - Calverside West. References are to Figure 7.

The upper coaxial field system on Calverside West is defined by coaxial boundaries which cross the wide terrace of Cringley Bottom and Cleasby from a boundary (the top dike) which extends below the southern slope of Cringley Hill at 400m OD and the higher slopes of Calver Hill where it reaches 425m OD. This field system is associated with a Bronze Age cairnfield settlement phase comprising very numerous stone cairns generally distributed within the field system but most concentrated on and below Cringley Hill and around Cleasby on areas of deeper soils. Further monuments predating the coaxial fields include a recently recognised heavily quarried round cairn-like structure on Cringley Bottom at SD99850023, several small ring banks interpreted as ring cairns or settlements, lithic scatters and eight burnt mounds. The three large circular embanked enclosures shown on figure 7 may prove to be the local equivalent of the Middle Bronze Age palisaded settlements so prevalent on the Cheviot fringe (Jobey and Tait 1966). Further unenclosed round house settlement complexes have been surveyed on the northern slopes of Calver, for example those at NZ005006, and on the south side of Hind Gill at NZ006012.



Photo 7: Reeth Low Moor. Coaxial of the Reeth System on Riddings Rigg.

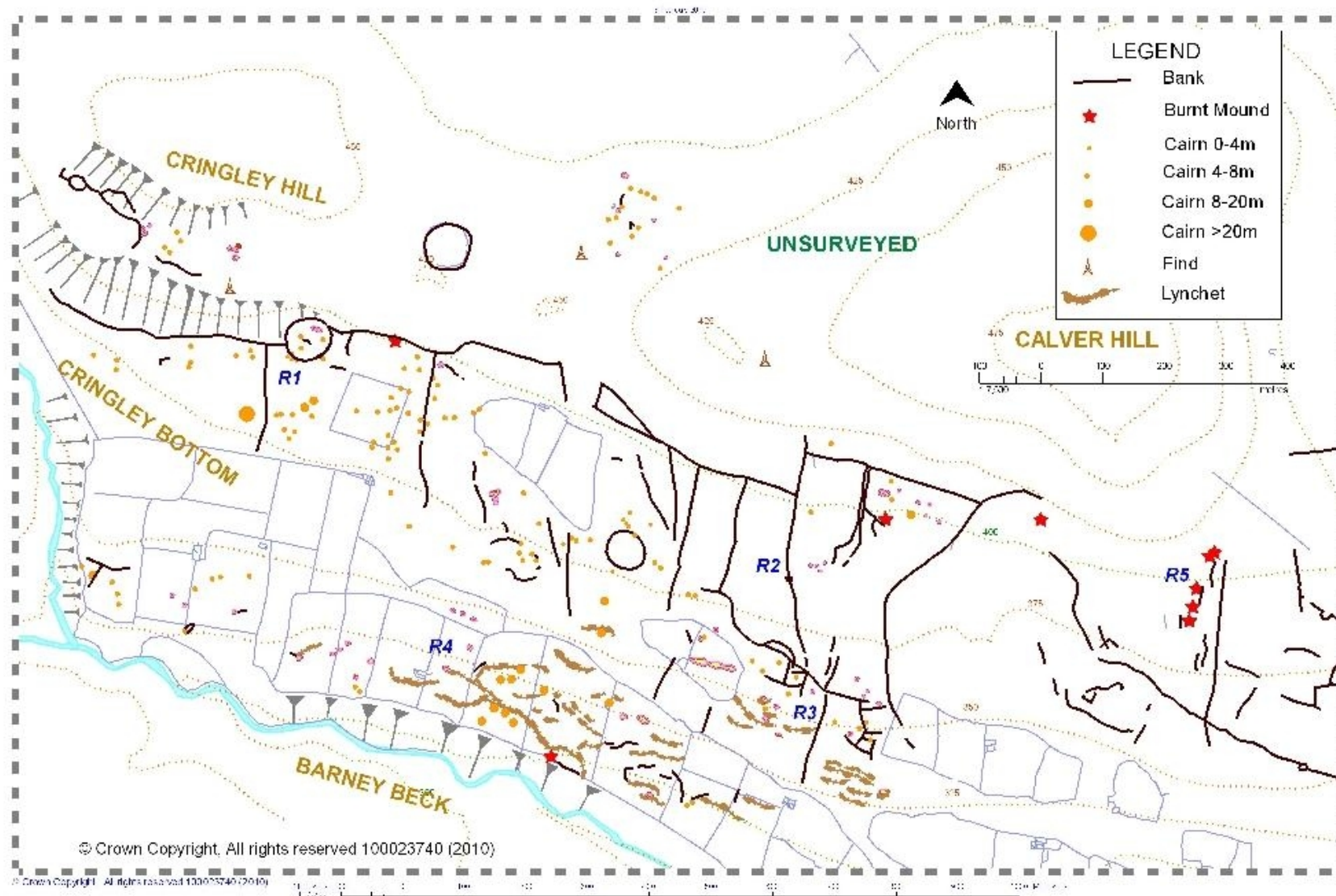


Figure 7. Reeth Low Moor. Calverside West.

3.8.1 Chronology of the Calverside West Coaxial Field System. For Key Locations, see Figure 7.

Key Location R1: Settlements on and below Cringley Hill. Here, a circular enclosure 60m diameter at NZ000004, 395m OD containing several clearance cairns and two hut circles is located at the limit of the field system which crosses Cringley Bottom. The top boundary of the field system abuts and respects this settlement enclosure. A burnt mound is located some 50m to the east of the enclosure. At least one of the numerous cairns on Cringley Bottom, appears to be kerbed and is likely to be a burial monument. Two further settlements located on Cringley Hill are shown on Figure 7, the first of these is centred on an ovoid enclosure at NY996006, 411m OD on the south facing upper slope of Cringley Hill. Several other enclosures and two round houses usually shrouded under heather, are located on this terrace. Further field walling, clearance cairns and a small complex ringwork associated with this settlement have been mapped higher and to the east on Cringley Hill. An assemblage of scrapers and a single broken barbed and tanged arrowhead were found all together on the rutted track above this settlement (see Laurie 2003, plate 40).

The large circular enclosure on Cringley Hill at NZ002005, 422m OD, is defined by a substantial stone wall 1.2m thick. The stone core of this wall has been reduced by quarrying but the earthfast basal facing stones are well preserved and the bank was revetted by occasional orthostats. This enclosure may be the local equivalent of the palisaded settlements of the Cheviots, (Jobey and Tait 1966) although no ring groove house structures are visible. Alternately, this enclosure may be an embanked stone circle similar to those of the Derbyshire Peak (Barnatt 1978).

At Key Location R2, a trench cut across a substantial field boundary, at SE00749997, 385m OD, provided radiocarbon dates from charcoal on both sides and below the bank to around 300BC (Fleming 1998, 138).

Key Locations R3, R4 and R5: Settlements and field system on the lower slopes of Calverside. At a later date, possibly following leaching and podsolisation of soils, settlement appears to have retreated downslope to more sheltered locations within the present day walled pastures of Low Cringley Farm above Barney Beck, **Key Location R3**. The settlement evidence here is very intensive, see figure 7 and, allowing for variable survival within cleared pastures, extends more or less continuously eastwards from Low Cringley for the full length of Calverside. An undated field system (the lower field system) associated with this settlement reaches an upper limit at 360m OD visible intermittently on open moorland above Nova Scotia, at **Key Locations R4** above Thirns at **Key Location R5** and further east above Riddings Farm where it forms the Late Phase 3 (the Healaugh System) of Andrew Fleming's analysis of the field systems on Riddings, Calverside East (Fleming 1998, fig 9.3).

This later settlement phase is a zone of unenclosed platform settlement with cultivation terraces and clearance cairns which may well be contemporary with the numerous house platform settlements and contemporary lynched field system above and to the east of Healaugh dated to the Late Iron Age and period of Roman occupation (Fleming 1998, fig 9.7) although no such association has been proved. Excavation has shown the Healaugh field system to overlie the earlier Phase 2 Reeth System (Fleming 1998, fig 9.2) and at several locations the earlier boundaries of the Reeth System are quarried out at the limit of the Healaugh system. The upper field system on Calverside West may prove to be contemporary with the early Phase 2 Reeth System. The lower field system on Calverside West incorporates at least one boundary of the earlier Reeth System. Further east, a Phase 1 circular enclosure on Riddings Rigg, is crossed and slighted by a coaxial boundary of the Late Phase 3, Healaugh field system, (Fleming 1998, fig 9.3; White 1997 fig 8).

3.9 Marrick Moor including Copperthwaite and Raygill Allotments. References are to Figures 8 and 9.

The coaxial field system on Marrick Moor is on the preferred NNE / SSW alignment and extends from the escarpment of the Main Limestone at Fremington Edge across Copperthwaite and Raygill Allotments to reach the road from Marrick to Hurst at Stelling and the walled pastures south of Owlands Farm, an area of 3km². This field system shares the same NNE / SSW alignment with the main phase coaxial field system on Skelton Moor, see Figure 8 to comprise a single planned landscape covering 9km² extending NE from Fremington Edge for a distance of 3.5km to reach Moorhouse Gill and Munn End above Telfit Farm in Marske Parish.

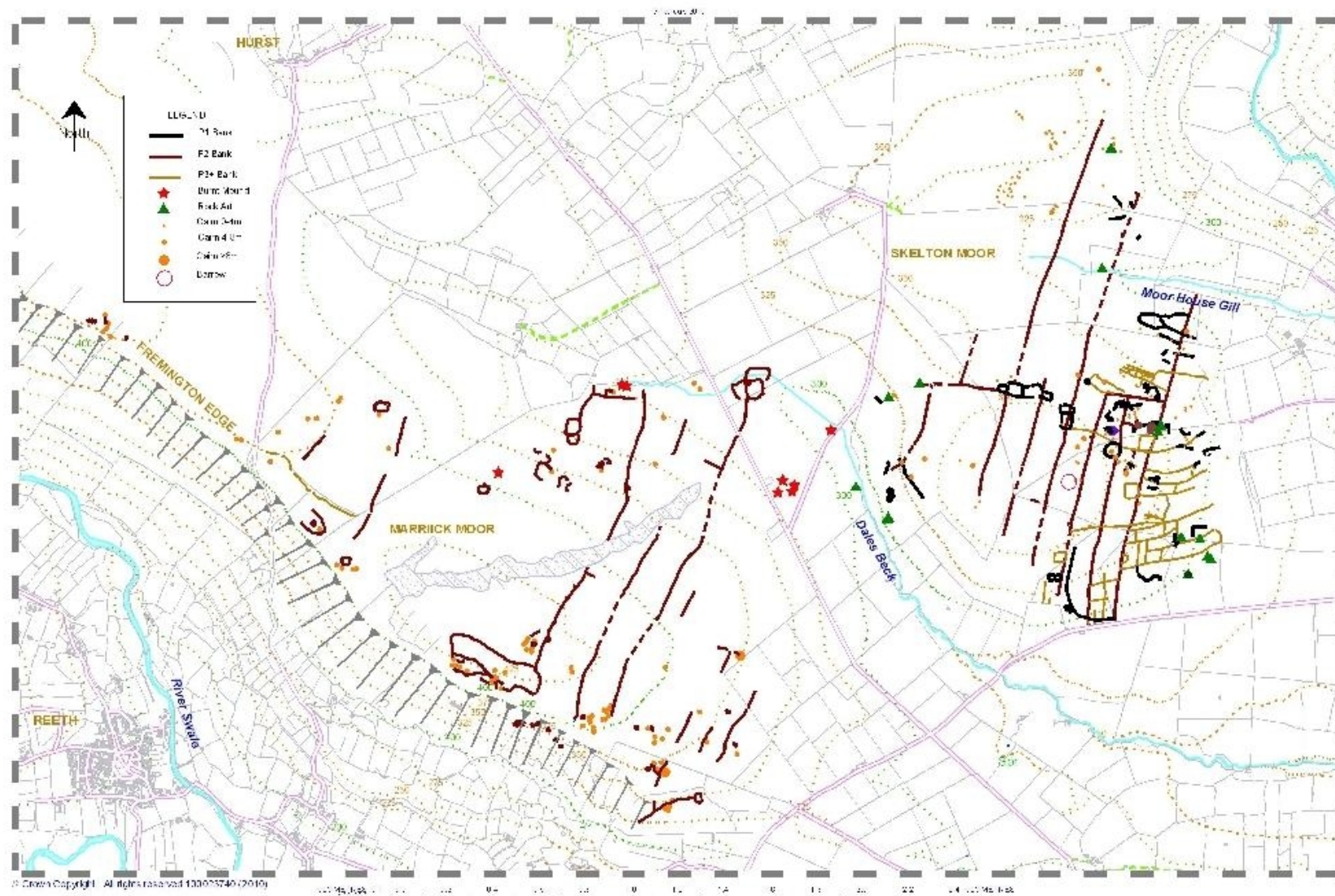


Figure 8. Marrick Moor and Skelton Moor. Coaxial field systems.

3.9.1 Chronology of the Marrick Moor Coaxial Field System. For Key Locations, see Figure 9.

The Marrick Moor field system can be shown to have developed from curvilinear paddock-like stone banked enclosures (**M1-M5 on Figure 9**) with occasional visible round houses and groups of small cairns characteristic of Bronze Age settlement elsewhere throughout Britain. This association between the coaxials of the Marrick moor field system and the unenclosed settlements is best seen **at Key Locations M1 and M4.**

At Key Location M1, a coaxial boundary abuts but does not cross the stone banked perimeter of a large elongated curvilinear enclosure, some 450m OD by 150m overall, located at 420m OD in a most exposed situation on Fremington Edge. This enclosure contains the visible remains of: a large round cairn which is itself the focus of three field banks. Within this enclosure are numbers of small cairns and possible round house enclosures.

Two further unenclosed settlement complexes, the Radio Mast Site (**M2**) and Fremington West (**M3**) are also located at 400m OD on Fremington Edge, the first of these is situated at the remains of the old radio mast east of the track to Hurst, above the White House, (Photo 8), the second was originally located by aerial photography on the edge of the escarpment above Castle Farm.

Strong springs rise further east lower down the dip slope to form the focus for several circular enclosures, a group of three burnt mounds south of Owlands Farm and one very large isolated burnt mound on open moorland at NZ09330248.

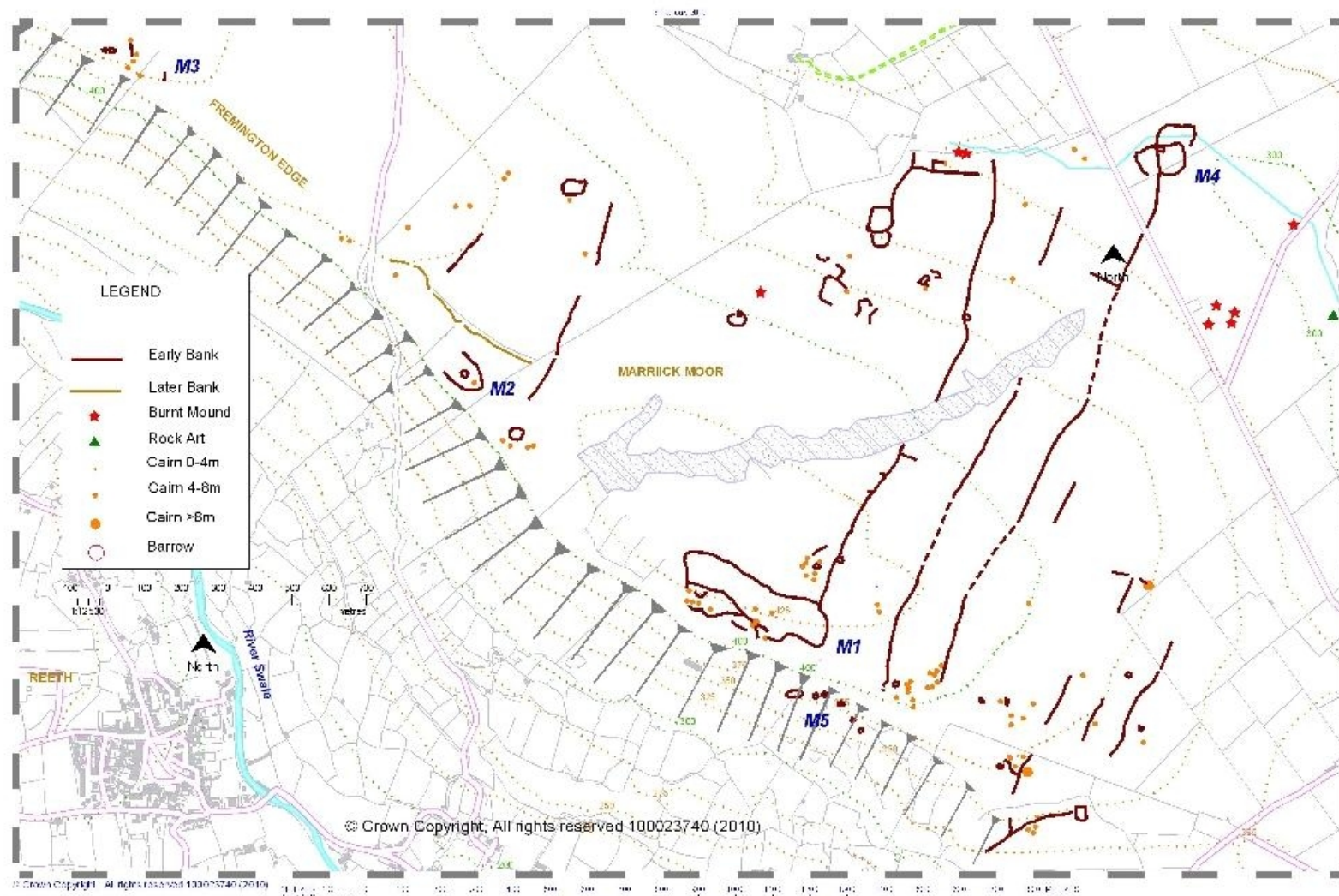


Figure 9. Marrick Moor. Fremington Edge, Copperthwaite Allotment and Owlands Allotment. Bronze Age settlements, burnt mounds and coaxial field system.



Photo 8: Fremington Edge. Coaxial at the Radio mast Site.



Photo 9: Copperthwaite Allotment. Coaxial at 420m OD.

Key Location M4, Fig. 9. Here, a field bank central to an unenclosed settlement with two round houses and attached fields first identified from aerial photographs, extends southward to Fremington Edge as a long coaxial (Photo 9). This unenclosed settlement at Stelling Bottom is very similar to the excavated settlement at Bracken Rigg, Upper Teesdale dated to 3180+/- 60 bp (Coggins and Fairless 1984). The single burnt mound located next to Dales Beck and the group of four burnt mounds below the road at Stelling Springs are likely to be associated with this settlement. Two cup and ring marked rocks close to Dales Beck have been identified (Beckensall and Laurie 1998, 96). The presence of two rocks with inscribed crosses at NZ072008 on Forty Acres points to a later association with Marrick Abbey.

Key Location M5, Figure 9 (above). Recent fieldwork above West Hagg and Sorrel Sikes farms has identified a significant settlement zone consisting of two rows of house platforms located in bracken on natural terraces between 300m OD and 380m OD below the highest scar formed by the Main Limestone on Fremington Edge. A narrow trackway leads from this settlement towards the field system on the high moorland of Copperthwaite Allotment above. Lithic finds on Marrick Moor are generally of mesolithic and early neolithic forms.

3.10 Marske. Skelton Moor including Forty Acres, Cleaburn Pasture, Cock How and Moor House Allotments. (See Figures 8, 10, 11 and 12, Aerial Photos 1 and 2)

The coaxial field systems on Marrick Moor and Skelton Moor share the same axis and were recognised, surveyed and briefly described during the early 1980s (Laurie 1985, figs 8.2, 8.5). The Skelton Moor field system described here extends from Dales Beck across Forty Acres, Musgrove or Cleaburn Pasture, Cock How and Moor House Allotments to reach Moor House Gill and Munn End on Skelton Moor. Subsequent work and satellite images have assisted an understanding of the complex development and relative chronology of this extensive field system.

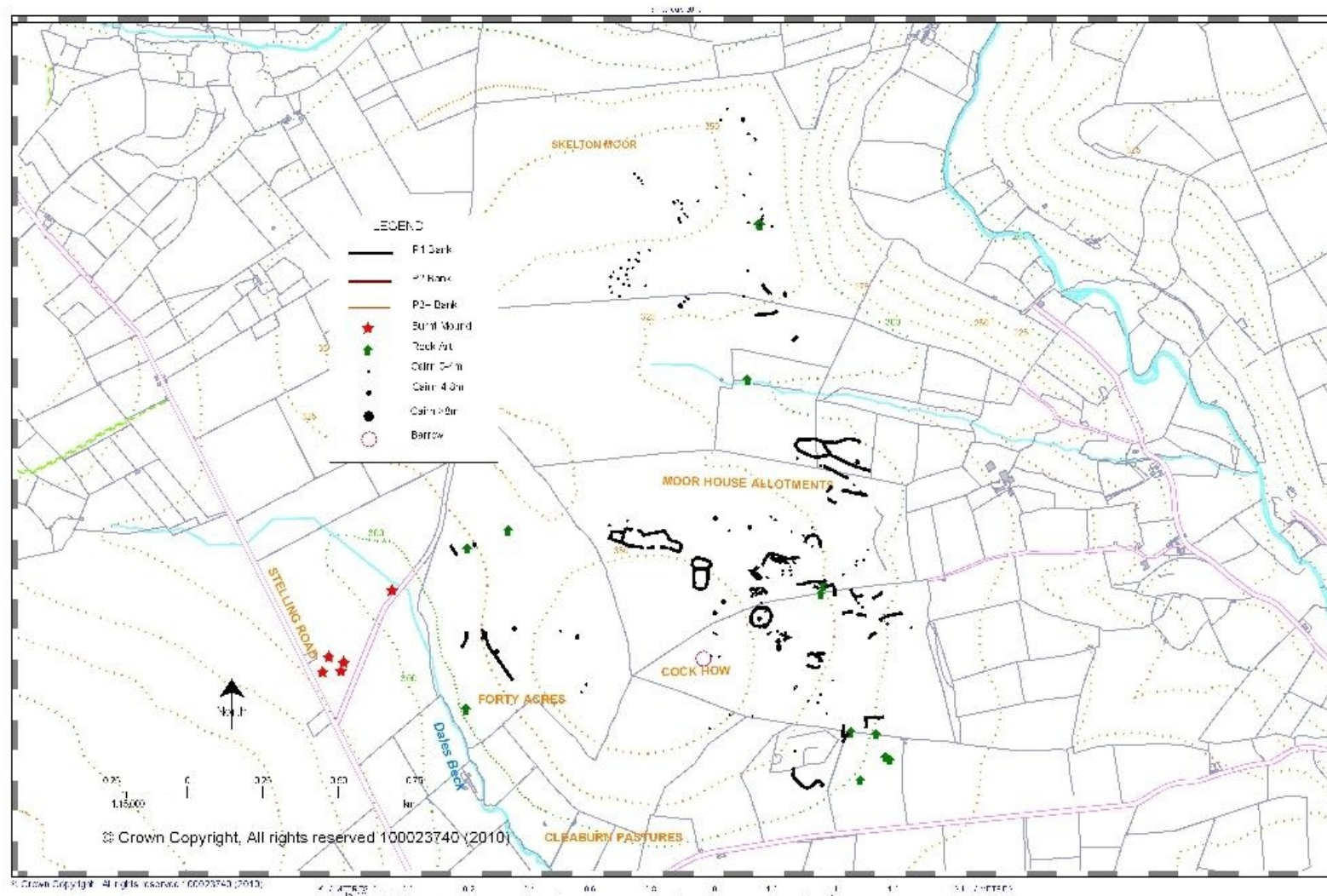


Figure 10. Marske. Skelton Moor including Forty Acres, Musgrove or Cleaburn pasture, Cock How and Moor House allotments. Early Phase 1 cairnfield settlement.

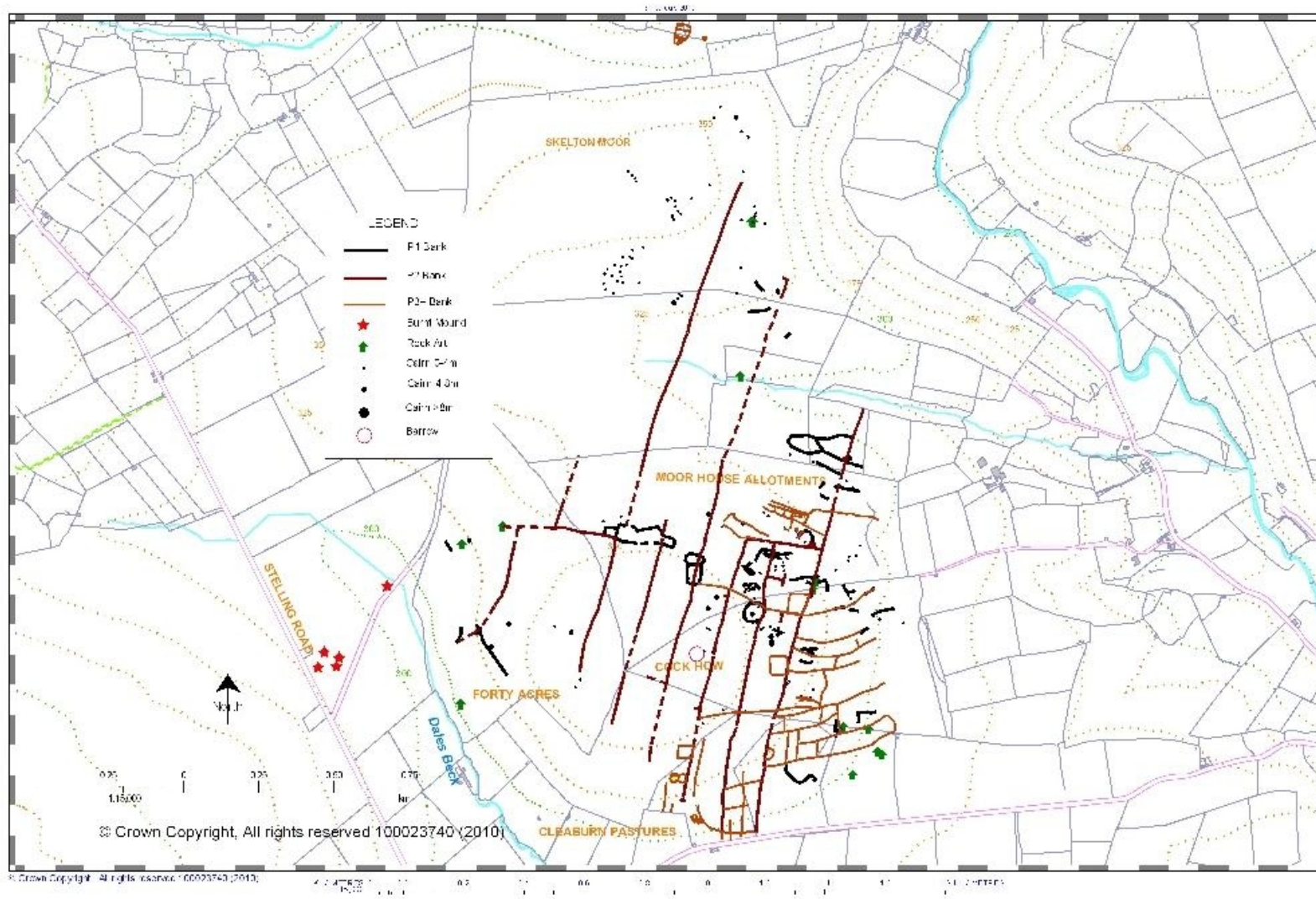


Figure 11. Marske. Skelton Moor including Forty Acres, Musgrove or Cleaburn pasture, Cock How and Moor House allotments. Main Phase. 2 coaxial field system and later settlements.

3.10.1 Chronology of the Skelton Moor Coaxial Field System. For Key Locations see Figures 10-12

In brief, the development of the coaxial field system on Skelton Moor is similar to that on Marrick Moor with characteristic evidence for an early, **Phase 1 cairnfield settlement phase**, identified across the whole area see Figure 10. This early phase, as elsewhere, comprises curvilinear stone banked enclosures with occasional round houses, groups of small clearance cairns, occasional large round cairns, ring cairns and rock art sites. No burnt mounds have been identified north of Dales Beck, however the burnt mounds at the springs south of Dales Beck may have related to unenclosed settlements at Forty Acres and on Cleaburn Pasture.

At Key Location K1, a 70m diameter Phase 1 circular enclosure has been incorporated within the Phase 2 coaxial field system indicating the continued occupation of this significant feature.

At K2, a large oval stone banked enclosure is slighted by later field clearance and by mining activity.

At K3, 4 and 5 grouped enclosures are crossed by later coaxials.

At K6 and 7 open settlements of house platforms have been identified on the east side of Dales Beck and on the south facing slopes of Cleaburn Pasture.

At K8 and 9 rectangular enclosures, possible settlements are attached to coaxial boundaries. These enclosures are associated with secondary field systems defined by long field boundaries subtended from and linking the coaxials.

At K10 a bank and ditched sub-rectangular enclosure with slightly bowed sides overlies a Main Phase 2 coaxial boundary. Similar enclosures elsewhere in lowland Britain have been found to contain round houses of Iron Age or Roman date.

At K11 a D shaped enclosure which probably enclosed at least one round house is attached to a coaxial boundary. This enclosure is central to a planned rectangular field system subtended from the coaxial.

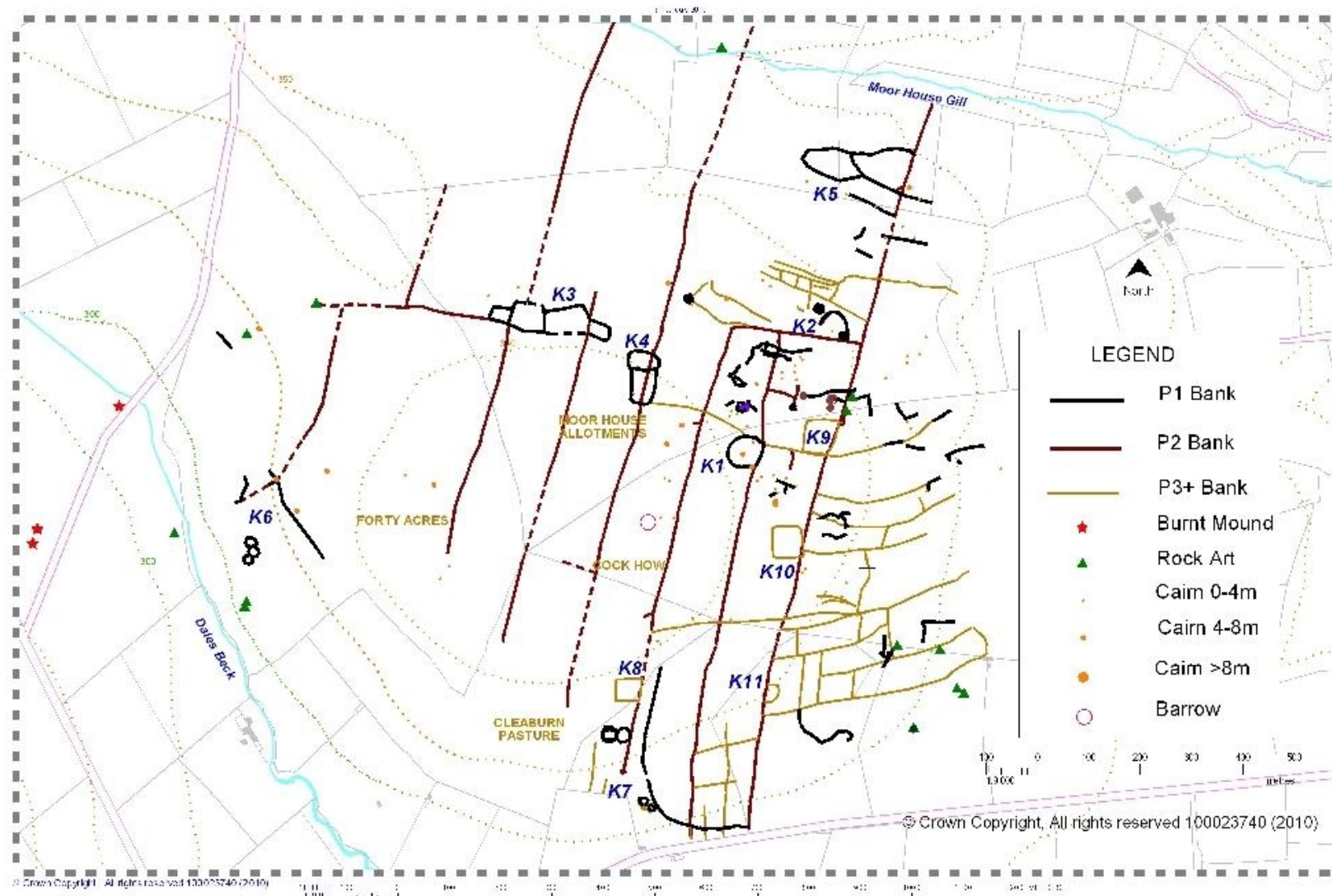


Figure 12. Marske. Cock How.



Aerial Photo 1: Marske. Coaxial field system crossed by the Cleaburn Pasture lead mining ground. Kind permission NYCC



Aerial Photo 2: Marske. Cleaburn Pasture. D-shaped enclosure and field system subtended from coaxial. Kind permission NYCC

4 Notes on the general distribution and context of Rock Art and Burnt Mounds on the North East Pennine Fringe.

At the commencement of this article, see Section 2 above, we have drawn attention to the fact that within the coaxial field systems are found examples of most of the features characteristic of unenclosed Bronze Age cairnfield settlements throughout upland Britain, (Barnatt 1987), namely isolated large cairns, groups of small cairns with numerous burnt mounds, curvilinear enclosures and occasional lithic scatters, irregular paddock like fields, cultivation terraces, house platforms, round houses, ring cairns, cup and cup and ring marked rocks, the last being limited in distribution in Swaledale (Beckensall and Laurie 1998).

In view of this, and to clarify the relationship between with the coaxial field systems which are the main subject of this article and the Bronze Age cairnfield settlements which together with the associated rock art sites and very numerous burnt mounds provide the evidence for the origins of the development of the organised landscapes of coaxial field systems we provide below a note on the regional context for these sites.

For the general distribution of these sites on the Eastern Pennine Fringe, see Figure 13 (Rock Art) and Figure 14 (Burnt Mounds).

4.1 Rock Art.

The general distribution of rock art sites across the Ure, Swale and Tees-Greta Uplands is not random. Rather the sites are located on the edge of high ground overlooking the Tees, Swale and Ure Lowlands, that is to say they overlook Teesdale and the Vale of Mowbray. Herein, Laurie suggests, lies the clue to their purpose. Some examples are shown in photos 10-13.

The understanding of the context of rock art in Britain can best be understood by relevance to the rock art of indigenous people, both in the past and in the present. Two examples will suffice to illustrate this. (4.1.1 and 4.1.2)

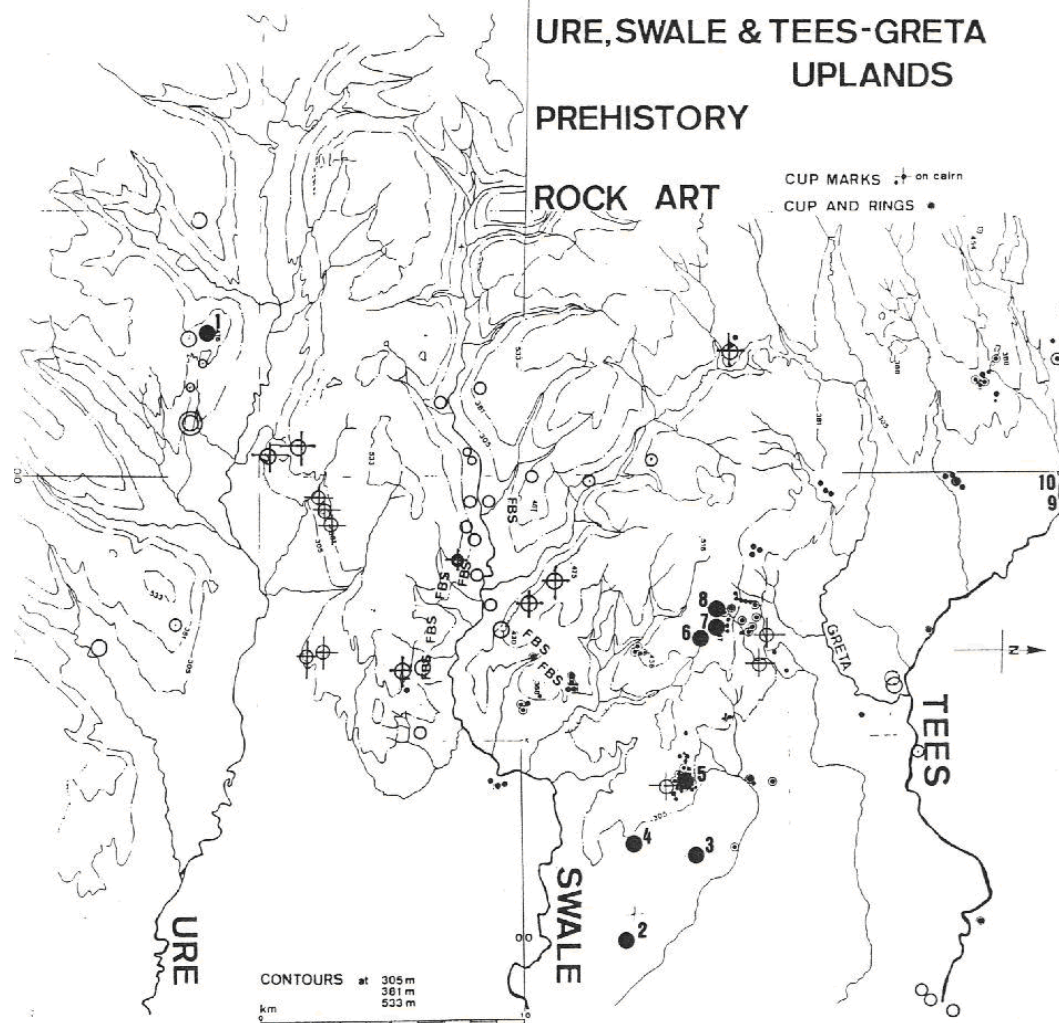


Figure 13: Prehistoric sites between Rivers Swale and Tees



Photo 10 Cup marked rock. Munn End. Skelton Moor.



Photo 11 Cup marked rock. Pastures below Cock How (Private land).



Photo 12 Cup and ring marked boulder, possibly originally in one of the small cairns nearby.



Photo 13 Cup marked rock. Forty Acres.

See Current Archaeology 241. April 2010, p9 for details of the extraordinary decoration on this rock revealed after removal of the turf covering.

4.1.1 Rock art of the Libian Sahara.

In the first instance, the painted rock art within the Tadrart Acacus and the engraved rock art of the Messak Plateau on the southern border of Libya near Ghat (Photo 14) depicts scenes representative both of hunting (Photo 15) **and first domestication of the wild Barbary Sheep** (The elusive Mesolithic / Neolithic Transition) (Photos 14-21) **in close association with cup and ring marked rocks identical to those on Gayles Moor, on Barningham Moor and elsewhere in Northern Britain** (Photo 10-13). The cup and ring marks of the Acacus and Messak Wadis are located above and directly in front of the same painted rock shelters (photo 17 and 18).



Photo 14: Libya; Tadrart Acacus; Wadi Teshuinat. View from Rock Shelter



Photo 15: Libya; Tadrart Acacus; Wadi Teshuinat Uan Amil. Barbary Sheep hunted



Photo 16: Libya; Tadrart Acacus; Uan Amil Mesolithic-Neolithic transition. Man and domesticated Barbary sheep



Photo 17: Libya; Tadrart Acacus; Uan Amil. Cup marked rock



Photo 18: Libya. Messak. Cup and Ring marked rock above decorated rock Shelter.
Photo: *Albada and Albada* 2000, Figure 87

4.1.2 Alpes Maritimes, Vallee de Fontanalbe.

Secondly, a model for a context for the rock art on the Pennine Fringe is provided by the annual transhumance to the Vallee de Fontanalbe below Monte Bego when 600 head of white cattle are led even today each year on the 20th June to the rich pasturage of the Vallee de Fontanalbe by transhumant herdsmen from the Plains of Lombardy (Photo 19) to eat their way through the rich herbage of the open larch woodland reaching an altitude of 2,200m at the upper limit of woodland where several hundred decorated rock surfaces show **that this was also the limit of the territory visited each year by transhumant herdsmen of the Late Neolithic** (photo 19 - 21).

Adopting this model, the rock art of the Pennine Fringe can be regarded as being **located at the limit of territories visited each year by transhumant herdsmen from the Ure, Swale and Tees Lowlands**. Laurie considers that both rock art and the very numerous burnt mounds are evidence for transient, seasonal occupation by transhumant pastoral family groups returning each year with their animals to their ancestral pastures at the best grazing areas- at the most constant springs, on the limestone terraces of Ure, Swale and Tees-Greta Uplands. These small family groups, possibly specialist herdsmen within a larger tribal group, would mark their territory with rock art.



Photo 19: Alpes Maritimes, Vallee de Fontanalbe. The transhumance



Photo 20: Alpes Maritimes. Monte Bego. Oxen and Plough scene.



Photo 21: Alpes Maritimes. Monte Bego. Fields and settlement carving

4.2 Burnt Mounds.

The general distribution throughout the Ure, Swale and Tees-Greta Uplands of the very numerous burnt mounds is indicated on Figure 14. Burnt mounds are semi circular discard heaps of fire cracked sandstone arranged around a central depression which marks the location of a trough. See Figures 22-25. These sites range in size from 4m to 18m diameter but most are from 8m-15m diameter. Hearths may be sited below, on or in the vicinity of the mounds. Burnt mounds are always located at the most constant springs which rise below the Main and Underset Limestones or on the banks of low energy streams. For clarity, not all the 150 or so burnt mound sites recognised to date are shown on this map, which is based on Laurie 2003, Figure 69. Burnt mounds can be regarded as indicators for the presence, in the vicinity of favoured springs, of the seasonal encampments of the same transhumant herdsman hunters who can be regarded as having made the rock art, or their direct successors, since the burnt mounds continued to be used for several centuries after the practice of making rock carvings was forgotten.

The distribution of burnt mounds in the northern Dales is far more widespread than rock art and, again is not random; they are located at the most constant springs, generally above 300m OD at regular intervals of 1km or so, Photo 22. Unlike the rock art which, except for one or two isolated examples in burial mounds, is absent from Upper Swaledale and from Wensleydale.

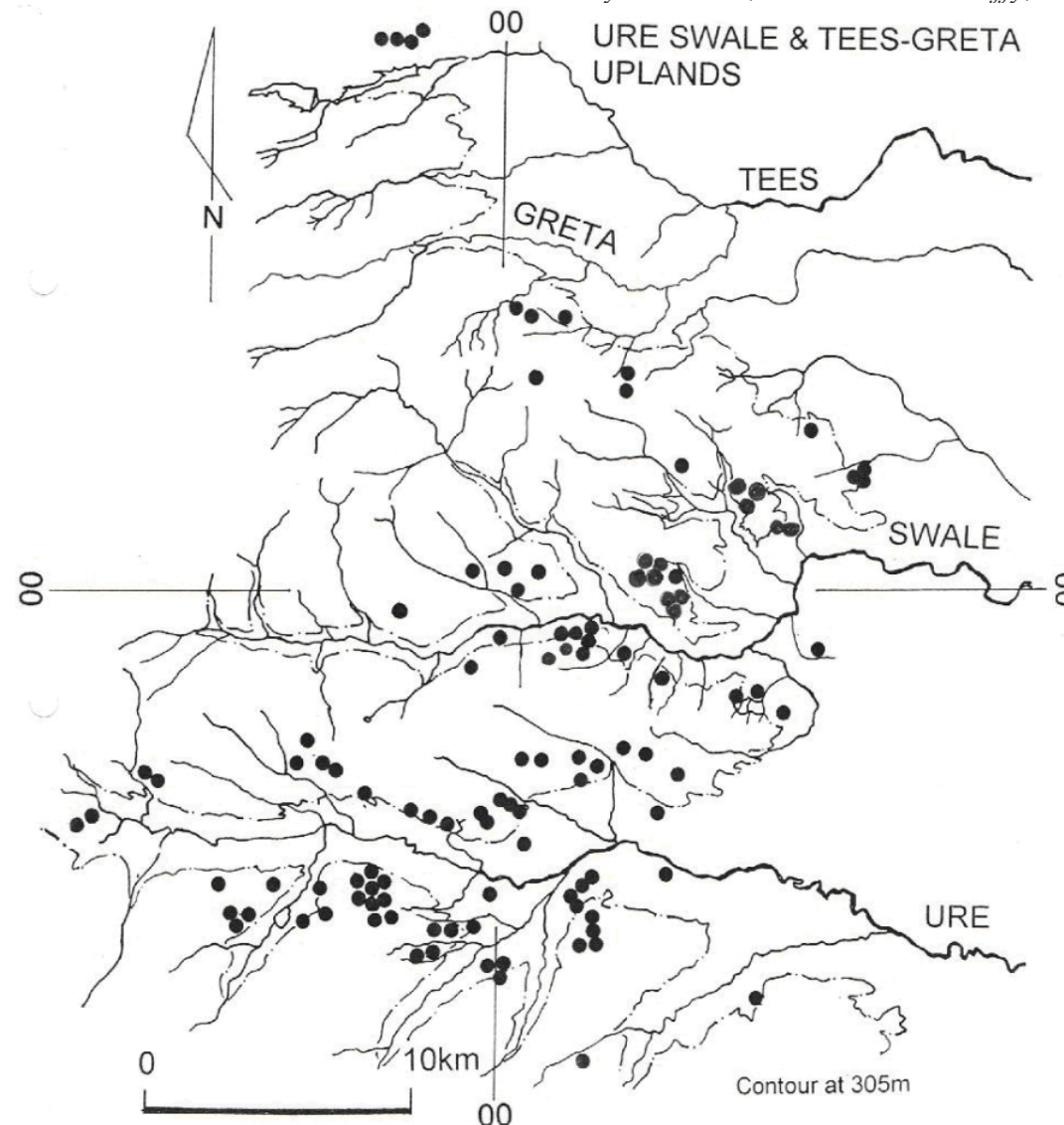


Figure14 Ure, Swale and Tees-Greta Uplands. Distribution of Burnt Mounds.



Photo 22: Burnt Mound Site 1 Long Scar Spring

In general, the rock art is regarded as of Late Neolithic / Early Bronze Age Date, whereas the very numerous radiocarbon dates from primary contexts within excavated burnt mounds indicate that these sites were used from the Late Neolithic, at around 2400BC, to the Late Bronze Age - not much later than around 800BC.

The framework suggested here for this transhumant way of living assumes that the Late Neolithic and Bronze Age herdsman communities who made the rock art and who used the burnt mound sauna / sweat house sites shown on Figures 13 and 14 would return at the onset of autumn to their main year round tribal settlements located at lower elevations in the Vale of Mowbray on the light fertile soils of the gravel terraces of the Tees, Swale and Ure Lowlands where concentrations of Late Neolithic Monuments, as at Catterick, West Tanfield and Boroughbridge mark their tribal settlement areas.

Scraper dominated lithic scatters and stray lithic finds provide further evidence for the actual location of their encampments and their activities in the landscape. For representative lithic finds in Swaledale and Wensleydale, see Laurie 2003. The juxtaposition of all this evidence can provide an insight into the way of life of the pioneering herdsman, hunters who made the rock carvings. The rock art is their signature on the landscape, the burnt mounds their footprint. (Bradley 1992, 1993, 1997. Laurie 2003, 2004).

This is the context in which rock art sites and burnt mounds should be considered and this is the real significance of the carved rocks. Much effort and print has been expended in recording the detail of the carvings. However the carvings cannot be understood and are mere curiosities without context.

Boulders decorated with simple cup marks and occasionally with more complex figures are occasionally incorporated within round barrows (burial mounds of Late Neolithic / Early Bronze Age Date). The locations of cup marked burial mounds in this area are indicated on Figure 13 which is based on Laurie 2003, Figure 71.

For details of the rock art sites on the Ure, Swale and Tees-Greta Uplands, see Beckensall and Laurie 1998.

A characteristic burnt mound, one of four burnt mounds located within the Army Feldon Ranges at the same spring rise, was recently excavated by Archaeological Services University of Durham, on behalf of Defence Estates (Laurie 2007. 'Excavation of an Enigma'. Conservation Update. Defence Estates), photos 23 -25. The excavated mound was radiocarbon dated to between 1430-1260BC, some 1000 years later than a sample taken from an adjacent burnt mound at the same spring which was dated to 2400BC.



Photo 23: Sturdy Springs, Army Range, Feldom. Burnt mound after removal of turf.



Photo 24: Sturdy Springs, Army Range, Feldom. Burnt mound. The trough.



Photo 25: Sturdy Springs Hearth

The significance of the numerous burnt mounds undoubtedly lies with their potential for future research as indicators of contemporary settlements which have left no other surface trace of their existence. Secondly, these highly compacted mounds protect the ancient land surface, often in a wet situation which can provide the opportunity to investigate the environment contemporary with the initial use of the sites. See for example: Topping, P. 1998. *The Excavation of Burnt Mounds at Titlington Mount, North Northumberland, 1992-3*. Northern Archaeology. Volume 15 / 16. 1998.

5 Conclusion

This account of the coaxial field systems of Swaledale is not the end of the story. It is confined to areas in the vicinity of Reeth which have been surveyed in detail. Further areas of Swaledale with evidence of early settlement which have not yet received the same level of attention are indicated on Figure 1. It is intended that these will be the subject of detailed survey by the Swaledale and Arkengarthdale Archaeological Group. Within the areas described here, the first priority for future research should be the investigation and dating of the Phase 1 unenclosed settlement (**Key location G2**, Figure 2) south of Grinton Lodge, the Phase 2 coaxial boundaries themselves and the multi period settlements on Harkerside west of Grinton Gill (**Key Location H2**, Figure 3). On Calverside, detailed survey and excavation of the platform settlements above Barney Beck in the Pastures of Low Cringley and on moorland above Thirns and Nova Scotia would be a priority (**Key Locations R3, R4 and R5**, Figure 7).

We have set out to answer three questions, the first of which was to determine the relationship between the coaxial field systems and the Bronze Age cairnfield settlements. This relationship has been generally confirmed: the coaxial field systems of Swaledale developed from unenclosed Bronze Age settlement.

The coaxial field systems incorporate early curvilinear enclosures which, if these prove to be the local equivalent of palisaded enclosures, may form the settlements at the onset of the construction of the coaxial field systems during the Late Bronze Age. Evidence for earlier settlements, visited each summer by transhumant (seasonal) pastoral herdsmen is confirmed by lithic scatters and the numerous burnt mounds. Burnt mounds are discard heaps of fire cracked stone best interpreted as sweat house / saunas established by repeated occupation of favoured locations at springs rising below the Main and Undersett Limestones (Laurie. 2003).

Secondly, it can be confirmed that in certain locations, the visible high elevation coaxial field systems were respected and incorporated within later field systems which relate to settlements located at lower elevations.

Finally, this paper has demonstrated that the extensive coaxial field systems of Swaledale were relevant to early farming communities from the Bronze Age through to the Roman occupation and beyond but still unanswered is the context for the coaxial fields: who planned and ordered the construction of this organised landscape?

In their most developed form it is suggested the coaxial field systems represent an organised **planned** landscape constructed and occupied by shepherd / herdsman owing their allegiance to a powerful Iron Age hierarchy, absentee aristocratic estate owners. Did this aristocracy whose 'Great Houses' may have been at Stanwick, Piercebridge or at Catterick, (Turnbull and Fitts 1988) spend their leisure time hunting from their equivalent of country shooting lodges: perhaps at Maiden Castle or at the defended settlement below Whitcliffe Scar, East Applegarth. Were the coaxial field systems designed by these aristocrats (some haughty Cartimandua?) as sheep runs in an attempt to benefit from a surging cross Channel trade in finished woollen goods (Wild, 1978).

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Appendix 1: Figures and Captions.

Figure 1. Swaledale. Coaxial field systems.

Figure 2. Grinton Moor, from Cogden Gill to Grinton Gill.

Key Locations mentioned in the text:

G1: Coaxial abutting earlier settlement boundary.

G2: Unenclosed settlement with four large round house enclosures.

G3-G7: Enclosures and possible settlements

Figure 3. Harkerside Moor from Grinton Gill to Maiden Castle.

Key Locations mentioned in the text:

H1–G5: for details, see below Figures 5 and 6.

Figure 4. Harkerside East, from Grinton Gill to Deer Park.

Key Locations mentioned in the text:

H1: Harker Mires: cairnfield, ring cairn, burnt mounds and coaxial field system.

H2: Settlements west of Grinton Gill and coaxial field system.

H3: Two late field boundaries abut earlier coaxial field boundary.

Figure 5. Harkerside West from Deer Park to Maiden Castle.

Key Locations mentioned in the text:

H4: Groups of small cairns (some within small fields) on all cultivatable areas and burnt mound above Harkerside Place. Coaxial field boundaries and trackways.

H5: Maiden Castle in context, showing limit of field system 0.2km west of Maiden Castle, small cairnfield and extended top dike boundary aligned on the earthen round barrow south west of Maiden Castle.

Figure 6. Reeth Low Moor.

Key Locations mentioned in the text:

R1-R5 for details, see below Figure 7.

Figure 7. Reeth Low Moor. Calverside West.

Key Locations mentioned in the text:

R1: Cringley Hill. Settlements, field system terminating at 400m OD., burial cairns, burnt mound, ring cairns, cairnfields, enclosures, lithic finds.

R2: Location of radiocarbon dated section through field boundary.

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R4: Low Cringley and Barney Beck pastures. Platform settlements, cultivation terraces, clearance cairns and burnt mound.

R5: Calverside above Thirns. Two field systems, the lower terminating at 360m OD, the upper at 410m OD. Seven burnt mounds.

Figure 8. Marrick Moor and Skelton Moor. Coaxial field systems.

Figure 9. Marrick Moor. Fremington Edge, Copperthwaite Allotment and Owlands Allotment. Bronze Age settlements, burnt mounds and coaxial field system.

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M3: Fremington Edge West Site. Ring cairn or round house, small cairns and field banks. Lithic finds.

M4: Stelling. Dales Beck. Unenclosed settlement with abutting coaxial, five burnt mounds and rock art sites.

M5: Unenclosed platform settlement below Fremington Edge.

Figure 10. Marske. Skelton Moor including Forty Acres, Musgrove or Cleburn pasture, Cock How and Moor House allotments. Early Phase 1 cairnfield settlement.

Key locations mentioned in the text:

K1: Circular Phase 1 enclosure with cairns, ring cairn and two cup marked rocks.

K2: Ovoid Phase 1 enclosure slighted by later field clearance and mining activity.

K3-K5: Grouped enclosures crossed by Phase 2 coaxial boundaries.

K6: Unenclosed platform settlement east of Dales Beck.

K7: Cleburn Pasture. Unenclosed platform settlements.

Figure 11. Marske. Skelton Moor including Forty Acres, Musgrove or Cleburn pasture, Cock How and Moor House allotments. Main Phase 2 coaxial field system and later settlements.

Key Locations mentioned in the text:

- K1: Circular Phase 1 enclosure incorporated within coaxial field system.
- K2: Ovoid Phase 1 enclosure slighted by later field clearance and mining activity.
- K3-K5: Grouped enclosures crossed by Phase 2 coaxial boundary
- K6: Unenclosed platform settlement east of Dales Beck.
- K7: Cleaburn Pasture. Unenclosed platform settlements.
- K8: Cleaburn Pasture. Rectangular enclosure attached to coaxial boundary.
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- K11: Cleaburn Pasture. D shaped enclosure and field system subtended from coaxial boundary.
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Figure 12. Marske. Cock How.

Figure 13 Prehistoric sites between Rivers Swale and Tees

Figure 14 Ure, Swale and Tees-Greta Uplands. Distribution of Burnt Mounds

Appendix 2: Photographs.

Photo 1. Reeth and Upper Swaledale from Reels Head. Coaxial field systems reach elevations above 400m OD on both sides of the Dale from Marske to Gunnerside.

Photo 2: Grinton Moor. Coaxial field boundary at 410m OD at Ridley Hush

Photo 3: Grinton Moor. Round house enclosure south of Grinton Lodge Youth Hostel.

Photo 4: Harkerside Moor East. Coaxial.

Photo 5: Harkerside Moor. Ring cairn at Harker Mires.

Photo 6: Ellerton Moor. Field system aligned on small standing stone. Three burnt mounds nearby.

Photo 7: Reeth Low Moor. Coaxial of the Reeth System on Riddings Rigg.

Photo 8: Fremington Edge. Coaxial at the Radio mast Site.

Photo 9: Copperthwaite Allotment. Coaxial at 420m OD.

Photo 10 Cup marked rock. Munn End. Skelton Moor.

Photo 11 Cup marked rock. Pastures below Cock How (Private land).

Photo 12 Cup and ring marked boulder, possibly originally in one of the small cairns nearby.

Photo 13 Cup marked rock. Forty Acres. See Current Archaeology 241. April 2010, p9 for details of the extraordinary decoration on this rock revealed after removal of the turf covering.

Photo 14: Libya; Tadrart Acacus; Wadi Teshuinat. Mosque at parking area below Rock Shelter

Photo 15: Libya; Tadrart Acacus; Wadi Teshuinat Uan Amil. Barbary Sheep hunted

Photo 16: Libya; Tadrart Acacus; Uan Amil Mesolithic-Neolithic transition. Man and domesticated Barbary sheep

Photo 17: Libya; Tadrart Acacus; Uan Amil. Cup marked rock

Photo 18: Libya. Messak. Cup and Ring marked rock above decorated rock Shelter. Photo: *Albada and Albada 2000, Figure 87*

Photo 19: Alpes Maritimes, de Vallee de Fontanalbe. The transhumance

Photo 20: Alpes Maritimes. Monte Bego. Oxen and Plough scene.

Photo 21: Alpes Maritimes. Monte Bego. Fields and settlement carving

Photo 22: Burnt Mound Site 1 Long Scar Spring

Photo 23: Sturdy Springs, Army Range, Feldom. Burnt mound after removal of turf.

Photo 24: Sturdy Springs, Army Range, Feldom. Burnt mound. The trough.

Photo 24: Sturdy Springs Hearth

Aerial Photo 1: Marske. Coaxial field system crossed by the Cleaburn Pasture lead mining ground.

Aerial Photo 2: Marske. Cleaburn Pasture. D-shaped enclosure and field system subtended from coaxial.

Note: Aerial photographs courtesy of NYCC

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info@swaag.org