Yeavering: A Palace in its Landscape
Research Agenda 2020

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1. Introduction

Yeavering is a site of international archaeological and historical interest which has been the focus of two substantial field projects (Hope-Taylor 1977; Harding 1981; Tinniswood and Harding 1991). While these have revealed a richly textured and varied human presence on the gravel terrace at Yeavering across millennia, many questions remain. Discoveries since Hope-Taylor's excavations have, for example, provided evidence of early medieval settlement activity in the immediate and wider region, suggesting that Yeavering was part of a more extensive network of early medieval activity (Gates and O'Brien 1988; O'Brien and Miket 1991; see Passmore and Waddington 2009; 2012). Even the assumed end of activity at Yeavering, traditionally linked to the establishment of the neighbouring 8th-century palace site of Milfield, remains untested in scientific terms (see Semple *et al*. 2020, 25-9).

Since Hope-Taylor's excavations, archaeological techniques have advanced dramatically. Geophysical survey, high resolution scientific dating techniques, and LiDAR data are just some of the methods that could now assist in understanding Yeavering and its hinterland, while advances in archaeological science have opened up possibilities for new work with human remains and environmental data (Ibid, 15-19). Complementary historical data such as field and place-names and later administrative divisions have potential too and a more integrated and multi-disciplinary approach to researching the hinterland of Yeavering may be beneficial and could open up additional volunteer opportunities.

This *Research Agenda* has been developed by Durham University in partnership with The Gefrin Trust. It responds to the *Research Assessment*, created by the same partners, that evaluates past archaeological fieldwork and research at the site of Yeavering and in its broader environs (Ibid.). This *Research Agenda*, building on the *Research Assessment*, sets out the archaeological research and fieldwork potential of Yeavering and its hinterland. This approach draws on previous environs projects, not least *The Traprain Laws Environs Project* (Haselgrove 2009) and the recent Historic England initiative for the North Pennines, *Miner-Farmer Landscapes of the North Pennines AONB* (Ainsworth 2007). This document also makes use of the *Archaeological Research Framework for Northumberland National Park* (Young *et al.* 2004) and the *North East Regional Research Framework for the Historic Environment* (Petts and Gerrard 2006). Note should also be made of the nearby *Scottish Archaeological Research Framework* and the current revision/augmentation of each of these guidance documents. The primary aim of the Trust in producing both the *Research Assessment* and a *Research Agenda* is to lay out a research framework for future field- and desk-based investigations and projects that seek to understand the site of Yeavering in long-term perspective and its relationship to archaeology of all periods within its immediate landscape and its wider hinterland.

This document is not intended to be prescriptive, but to act as a stimulus for conversations with colleagues regarding the potential for implementing a series of research-driven strategies, enabling us to better understand the nature of the site, its evolution across time, and crucially, its place in the wider historic landscape. Key research themes are identified and presented below. This list is intended to encourage new field survey, interventions and

research which we hope will lead to a more nuanced and in-depth understanding of this key site in its broadest context.

In the process of researching and constructing both documents, a Geographic Information System has been created for the site of Yeavering and its hinterland. This was developed at Durham University by Brian Buchanan and Sarah Semple with funding from the University and The Gefrin Trust. The GIS integrates many of the datasets listed in the *Resource Assessment*, including the HER, NMR data and 1 m resolution LiDAR data. The features and buildings at Yeavering, of all periods, have been digitised, rectified and included in the database. Two zones were identified for the purposes of collecting information on datasets and discoveries: **Zone A,** the site and its immediate surrounding landscape and **Zone B,** which comprises the broader hinterland around Yeavering, including numerous sites and finds of prehistoric and early medieval importance (Fig. 1). These zones are used here with the *Research Agenda* to situate the gaps in knowledge, and the research priorities for the future, in terms of the site and its broader landscape.

2. Gaps in knowledge: Zone A

2.1 The Site

Despite being the focus of two excavations, questions still remain about the development of prehistoric to early medieval activity at Yeavering and the connection of these phases of activity to multi-period evidence which is now confirmed in the vicinity of the palace site. Elucidating this connection is not an easy task. The recovery of prehistoric features was incidental to Hope-Taylor's explorations of the early medieval settlement. Indeed, prehistoric features are often hard to discern from aerial photographs and the henge excavated by Anthony Harding was only recognised after several seasons of regular aerial survey. More recently, additional features of likely prehistoric date have been identified by means of multi-spectral aerial photography and geophysical prospection (Semple *et al*. 2017; Semple et al 2020). While excavations, aerial photographic evidence and geophysical survey hint that the fringes of the gravel terrace acted as a natural boundary for prehistoric and early medieval activity (Figs. 2 and 5), we still do not know this for sure. Indeed, the Battle Stone to the east of the terrace, a broken ditched large enclosure just visible on aerial photographs on the dipping southern slope of the terrace, and occasional appearances of undiagnostic crop marks in the field immediately west of the quarry, all hint that, at times, activity may have spilled beyond the immediate confines of the gravel rise.

Potential evidence for early prehistoric activity on the terrace is meagre in the extreme. Waddington (2005: 90) has proposed that an ochre rod recovered in a secondary context from the outer palisade trench of the Great Enclosure was of early prehistoric date. More substantially, and drawing on extensive fieldwalking evidence from the Till-Tweed Geoarchaeology Project (Passmore and Waddington 2009; 2012), Waddington has argued that the fluvioglacial gravel terraces sitting just above the floodplain in the Milfield Basin, not least the Yeavering site itself, would have been very attractive for periodic Mesolithic

hunter-gatherer activity (2005: 87).

Excavations on the gravel terrace have produced a number of finds relating to the Neolithic and Bronze Age, but there are still gaps in our knowledge regarding the context for some of the recovered material. Further exploration is needed, for example, in terms of putting in context the finds of Neolithic Carinated Bowls, Impressed Wares and Grooved Ware. The latter may have a locus in the evidence for ritual activity represented by the henge, or there may be new features of Neolithic and Early Bronze Age date that await discovery.

A sufficient number of burials were found in both excavations as to indicate an extensive Early Bronze Age cemetery of mixed cremation and inhumation rite across the whole of the gravel terrace, however its extent, evolution and something of its structural form requires better understanding (Hope-Taylor 1977, fig. 73). There is also lamentably little evidence available for activity on the terrace between the end of the Early Bronze Age and the beginnings of early medieval activity, though numerous features reported in brief by Hope-Taylor in the Western Cemetery area of his excavations require further clarity.

Since 1950, new air photographic footage has also revealed additional features on the gravel terrace, including halls, a broken ditched circular enclosure and henge to the south of the modern road (see discussion by Tim Gates (2005), but also an air photograph provided in 2007 by the Environment Agency: Fig. 2). Most recently, enhanced aerial photographic methods, using a drone, have identified two additional circular features or ring ditches in the complex to the north, immediately east of the quarry (Fig. 3). Resistivity survey conducted at Yeavering 2007-9 by Durham University, with the Gefrin Trust, corroborates these (Fig. 5), and has revealed traces of additional and intriguing features on the palace site. These include **A**: a smaller earlier double palisade enclosure; **B**: one or more rectilinear features, perhaps buildings, lying within the lip of the palisade enclosure; **C**: a funnel-shaped feature with high resistance rectangular platform set within its splayed ditches; **D**: a henge complex excavated by Harding (Harding 1981; Tinniswood and Harding 1991); **E**: hall-type structures already recognised on aerial photographs; **F**: faint traces of two new large circular features, and a rectangular structure commensurate in size with other excavated halls.

Thus there are opportunities to undertake further investigations on previously undiscovered, as well as existing, prehistoric features and sequences, alongside the known and unknown early medieval resource. Modern excavation would provide opportunities for scientific dating and in turn provide an opportunity to refine the current chronological scheme for the palace site. We currently lack a refined understanding of how different phases of activity relate to each other and whether they represent sporadic moments of investment, or a continuous occupation of the palace and its surroundings.

The early medieval occupation of the palace site as presented by Brian Hope-Taylor is a compelling account of an archaeological sequence but heavily framed by a reliance on historical sources. It rests upon a very fragile chronology, one founded upon a relative sequencing of the site archaeology and a personal reading of the evidence presented by the historical record (1977, 276-324). In the half century since he wrote his text, changing perspectives, an exponential increase in the dataset for the period, and the widening range of relevant scientific applications all make a review and re-appraisal of his excavations both

desirable and necessary.

The question of whether the earliest phases of activity represent the efforts of post-Roman communities in the locality from the mid-6th century or instead is more indicative of a culturally 'Anglo-Saxon' presence in the late 6th and 7th centuries, remains to be answered. Sam Lucy noted the diverse nature of the burial rites evident at Yeavering, noting a lack of diagnostic 'Anglo-Saxon' attributes (Lucy 2005). An Anglo-Saxon presence in the region has long been argued for in the mid-6th century as attested by the documentary sources. More broadly in the Milfield Basin, and at some considerable remove from the familiar concentrations of early Anglo-Saxon activity further south, material remains, such as that from the cemetery at Milfield North and the brooch fragments discovered by metal detecting at Etal, Ford, imply a 6th-century presence (Collins 2010).The discovery in the hinterland of Yeavering of early medieval settlements, producing radiocarbon dates suggesting activity of late 5th/6th-century date on the gravels along the Glen-Till valleys (Passmore and Waddington 2009; 2012), combined with a relatively early date for an inlaid iron buckle of Frankish type discovered at Yeavering as a stray find (late 6th/early 7th-century – Welch 1984), suggest that dating evidence for the inception of activity at Yeavering should be revisited. The dating of the Great Enclosure, placed in its earliest phase in the 4th century AD by Hope-Taylor, is also insecure. O'Brien (2005, 145-52) has interrogated the stratigraphy of the Great Enclosure and demonstrated how unclear the archaeological evidence is as to the date of its inception; while Miket (2013) has pointed to conflicts in Hope-Taylor's interpretations of a structure on Yeavering Bell as late 4th century or post-Roman in date.

Likewise, the ultimate end of the sequence is tied to the words of Bede, who describes the palace site as abandoned in his life time, in favour of *Maelmin* or Mifield in the close locality (HE II, 14). Sam Lucy has suggested that burial, at least, may have continued into the 8th century in the eastern sector (2005), while the sequence of activity in terms of the Great Enclosure and hall complex, and the recognition of new potential structures in this area, also raise questions over the proposed abandonment of the palace, c. AD 700 (Figs. 4 and 5).

In sum, despite two substantial periods of excavation, targeting areas north and south of the modern road, there are still gaps in knowledge regarding the chronological sequence. The spatial limits of activity on the gravel terrace in and between prehistory and the early medieval period remain unknown. Questions remain over the nature and extent of prehistoric, especially late prehistoric activity on the terrace, while the inception and end of the post-Roman settlement on the terrace is also poorly understood.

2.2 The Hillfort

Long-standing speculation regarding the relationship between Yeavering Bell hillfort and the early medieval settlement at its foot has been thrown into sharper focus through the recent publication of Hope-Taylor's excavations on its crest (Miket 2013). The discovery of Roman pottery and coins on the summit may point to either focused activity or mere casual losses (Hope-Taylor 1977, 267; Miket 2013, 149–150), but there are suggestions

that the sub-circular enclosure on the eastern summit may post-date several house platforms (Pearson 1998; Oswald and Pearson 2005, 109, 116–117), although the stratigraphic relationships, both here and more widely within the hillfort, remain far from certain (Oswald and Pearson 2005, 117–118; Miket 2013, 152). More broadly in the Cheviots, many of the hillforts were adapted to different roles by the late Iron Age and Roman periods (e.g. St Gregory's Hill, West Hill, Mid Hill, etc., Oswald and Pearson 2005; Oswald and McOmish 2002; Oswald *et al.*, 2000, 2006, 2008) or else were abandoned (e.g. Wether Hill, Ingram; Topping 2004; 2008) and it is strongly held that Yeavering Bell did not continue as an active settlement (Pearson 1998). Questions remain, however, over the types of activities and social relationships signified by the Roman artefactual assemblage from the summit.

While the hillfort may have been long disused as a settlement, the release of 1 m resolution LiDAR data for the Cheviots has revealed a wealth of evidence for activity of different dates on the lower slopes of Yeavering Bell. This prompted a recent detailed survey in 2016, concentrated upon the landscape to the south of the hillfort (Ainsworth *et al*. 2016 – Fig. 6). This facilitated assessment of features surviving as low earthworks, concentrated within an area of about 2.5 square kilometres south and east of Yeavering Bell (Ainsworth *et al.* 2016). Traditional field observation was used to interpret features recorded, wholly or partially, by the LiDAR data, including a presumed Bronze-Age fieldscape with dispersed roundhouses and an overlying scatter of typical Late Iron Age and/or Roman Iron Age small, enclosed settlements. Three of these settlements suggested potential for continued use into the early medieval period, as evidenced by overlying (and currently undated), stone-built rectangular buildings. It is also conceivable that some of the handful of 'high medieval' structures identified may have earlier origins. (Ainsworth *et al.* 2016) (Fig. 6).

There are opportunities, therefore, for further survey, allying LiDAR data with traditional field observation to characterise features and monuments evident on the north and west slopes of Yeavering Bell. This could be augmented with targeted earthwork survey and, crucially, selected excavation, with the objective of extracting precise chronological information. Such interventions can be informative more broadly with regard to late prehistoric and Roman Iron Age activity in the uplands, which remains scarce in terms of the immediate vicinity of Yeavering. Selected excavation in some areas might also have value in terms of 'ground truthing' and dating some features.

2.3 Environment

Plant and faunal remains were located during both Hope-Taylor's and Harding's excavations on the gravel terrace. There is the potential to revisit both datasets, although those from Hope-Taylor's excavations have yet to be located. The faunal assemblage recovered by Hope-Taylor was significant, with most specimens derived from structure D2, which lay to the west of the complex (Higgs and Jarman 1977, 327-8). If this could be relocated, the animal bone could be reappraised, including the application of isotopic analyses which would inform on processes of animal management, stock-movement and

seasonal resource procurement. In particular, strontium isotope analysis of relevant faunal dental material may address the extent to which livestock was driven to the palace from elsewhere and the extent to which they were reared locally (pers. comm. D. O'Meara) The cremated but unidentifiable bone from Harding's excavations of the southern henge also provides possibilities, given that new scientific developments are now facilitating isotopic analyses on cremains (Loeffelmann *in progress*). Significant amounts of charcoal are recorded in Hope-Taylor's excavations as well. Thirty-eight samples were examined by the laboratory of the Royal Botanic Gardens at Kew (Hope-Taylor 1977, 333). Some of these are identified as wall timbers, some as hearth debris, while other samples derive from the Great Enclosure. The charcoal was examined, with the most frequent species identified as oak, but they may offer additional information on the surrounding woodland environs and have potential to provide radiocarbon and/or dendrochronological-dates.

Within the immediate environs of the palace site, there are possibilities for geoarchaeological investigation, not least the large palaeochannel that appears on aerial photographs along the southern edge of the gravel terrace (Fig. 2). In addition, archaeobotanical evidence from and near the palace site for cereal cultivation would be of vital interest. Significant changes in crop-usage emerged in the early medieval period. At a national scale a shift has been observed, whereby spelt and emmer decline in frequency, in favour of various wheats, rye and oats (Van der Veen et al. 2013, 171; Moffett 2011). The archaeobotanical evidence base for early medieval northern England is presently relatively sparse (cf. Huntley and Stallibrass 1995; Hall and Huntley 2007). As such, the acquisition of new data from Yeavering would both address that imbalance and have a bearing on the interplay of Roman Iron Age and Anglian influences at play at the palace site.

2.4 Cemetery evidence

Burial at Yeavering is evident in the Neolithic and the Bronze Age. In the post-Roman period inhumation rites were central to the expanding complex, with at least two foci: the western ring-ditch and the Bronze Age barrow and standing post within the lip of the Great Enclosure to the east (Fig. 4). The acidity of the soil, however, has resulted in very poor bone survival. This has hampered any form of osteological or palaeopathological analysis, although within the surviving archive are human tooth fragments and some fragments of cremated bone. In addition, a skull was found in Hope-Taylor's archive which may derive from Yeavering (RCAHMS and The Gefrin Trust 2007). The photographic archive housed with RCAHMS does show a burial under excavation, displaying more substantive skeletal survival (Fig. 8). Although limited these human remains do have potential for radiocarbon dating, DNA analysis and even isotopic analyses. These considerations should encompass mortuary assemblages of all periods on the gravel terrace. The survival of numerous fragments of cremated bone from the gravel terrace, found in relation to the Hope-Taylor and the Harding excavations, also presents a further opportunity for exploration (see Loeffelmann *in progress*).

2.5 Objects: the post-excavation archive

Many of the finds from Hope-Taylor's campaigns were located in his personal effects after his death in 2001 and were initially housed with Historic Environment Scotland. An assessment of the surviving post-excavation finds was undertaken by Roger Miket. A catalogue was published and categories of material were also assessed for future analysis, e.g. the ceramics (RCAHMS and the Gefrin Trust 2007, 5). These finds were then lodged with The Great North Museum. Sadly over time, some finds mentioned in the Hope-Taylor report have been lost e.g. the *triens* coin.

In 2018, Roger Miket, on behalf of the Gefrin Trust was able to reunite these finds with others recovered from the Historic Environment Scotland archive and those from Anthony Harding's excavations of the henge. The full assemblage is now located in the Department of Archaeology at Durham University undergoing further cataloguing and assessment.

These assemblages offer the chance for additional specialist investigation. Some preliminary research has been undertaken on the collection, for example Alan Vince undertook a review of the diagnostic 'Anglo-Saxon' vessels and fabrics (ibid.). The report and the archive of excavation photographs record, in some cases, where discoveries of objects, charcoal and bone were made by Hope-Taylor and his team, but a 'finds plan/plot' did not appear in the final publication. The lists of finds and contexts published in the excavation report could, however, be used to create a spatial map of the finds in relation to the excavated structures in advance of any future exploration on-site.

A first priority, therefore, using the report, the archive and excavation photographs, is to re-locate the finds within the excavation matrix where possible. Then, using the 2007 assessment as a basis, a full post-excavation assessment is needed, to provide a framework for conducting applied and contextual research on at least some categories of material. The finds provide a number of opportunities for additional analyses. Initial survey of the archive suggests the metalwork would benefit from a complete reassessent as well as the extensive ceramics collection. Human bone and teeth have already been embraced within the dating and isotopic-research programme for the Durham-based Leverhulme-funded project: *People and Place: Creating the Kingdom of Northumbria*. The presence of charcoal and the re-discovery of some of the animal bone from the excavations present opportunities for both C^{14} and further isotopic analyses. A number of priorities can be identified:

The surviving charcoal, human and animal bone together present a unique opportunity to undertake a comprehensive C^{14} dating programme. The charcoal, human and animal bone require initial assessment and cataloguing and species identification. These finds, with others, need to be securely located within the site matrix where possible. A scientific programme involving dating and isotopic analyses can then be planned, funded and executed.

In terms of further applied analyses, further work on the prehistoric ceramic assemblage might be beneficial (although see Ferrell 1990). Some assessment has already resulted in the re-identification of some sherds (RCAHMS and the Gefrin Trust 2007). There are opportunities here to undertaken comparative work with other more recently recovered

assemblages. Millson's review of Neolithic and Bronze Age ceramic assemblages in the Tyne-Forth region is of particular interest in this regard (Millson 2007; 2013; Waddington et al 2011). Analysis of the surviving post-Roman fabrics, together with comparative work on existing late Roman and Anglo-Saxon finds, such as those from Bamburgh, Cheviot Quarry, Lanton Quarry or Ingleby Barwick, could prove valuable. Residue analyses of the ceramic assemblages could also be used to shed light on livestock rearing and the exploitation of other resources at the palace site. Likewise, the small collection of ironwork, copper alloy items and glass objects could be re-evaluated more broadly in the context of other existing finds assemblages from the region, or from other 'palace' complexes.

The evidence of metalworking from Harding's excavations comprises a range of crucible fragments with residues which could now be revisited with new techniques (Tinniswood and Harding 1991), while the metalwork collection as a whole, after initial assessment, would benefit from a complete reappraisal. Finds of metalworking residues from Cheviot Quarry (Waddington 2009) nearby also offer the potential for comparative work, as do the more substantial metalworking remains at Bamburgh (Bamburgh Research Project 2018).

2.6 Later developments and the afterlife of Ad Gefrin

Following Bede, the chronological sequence developed by Hope-Taylor assumes that activity at the palace site drew to a close once its functions had been supplanted by the palace at Milfield. However, Lucy's proposal of 8th-century burials in the eastern part of the palace site (2005), the interweaving stratigraphic complexity of the halls (Hope-Taylor's Area A) and Great Enclosure, and new structures identified on the gravel terrace following Hope-Taylor's excavations, suggest a longer sequence. Beyond this, the nearby deserted medieval village of Yeavering, immediately south-west of the palace site, remains very poorly understood, as indeed is the relationship with the village of Kirknewton, first noted in the early 12th century (the earliest sculpture in the church is of similar date; Cramp 1984, 251).

It is clear that Yeavering was the focus for an agricultural community of modest size in the later medieval period and one that was marked by strife, given its proximity to the border between England and Scotland. This is evidenced both by recorded battles – at nearby Humbleton Hill in 1402 and at Yeavering itself in 1415 (Frodsham et al 2004, 91) – and by the presence of the defensive bastle at Old Yeavering, thought to date to the late 16th century. Research into Yeavering and its environs would provide new insights into what was considered 'reiver country' at the close of the later medieval era and, from a longer-term perspective, provide an excellent case study for research into cattle droving and the slow decline of transhumant practices between the later and post-medieval periods. In particular, the presence of a long-term cross-border cattle droving hub at Bendor, a short distance to the east of the palace site, demonstrates its proximity to a major node in at least the post-medieval practice of this trade (Roberts et al 2010). Beyond droving, the immediate lowland surrounds of Yeavering are characterised by meadow earthworks that may relate to the Culley's scheme of agricultural improvements in the 18th and 19th

centuries (O'Donnell 2015, 106) and the construction of the Alnwick and Cornhill Branch railway in 1882 which cut across the top of the Yeavering gravel terrace.

3. Gaps in knowledge: Zone B

3.1 Settlement patterns

Yeavering sits in a broader hinterland with a remarkable density of multi-period activity. Despite this, gaps remain in our knowledge of how land use and settlement developed across prehistory and through in to the historic period. In recent years, assessment of a growing wealth of aerial photographs have demonstrated a busy lowland scene in late prehistory to the early medieval era along the Till-Tweed-Glen river valleys (see Gates and O'Brien 1988; Gates 2005; 2009; 2012). Likewise, the evidence of LiDAR data suggests that a richer upland archaeology awaits investigation (see Ainsworth *et al*. 2016).

Further survey and excavation are central to understanding the late Iron Age/Roman Iron Age to early medieval transition. For example, the *Discovering our Hillfort Heritage* project identified a number of Iron Age hillforts in the Cheviot Hills, with evidence suggesting activity in the Roman Iron Age (Oswald and McOmish 2002; Oswald et al 2006). Nearby examples to Yeavering include much smaller settlements at West Hill hillfort and St Gregory's Hill hillfort, just to the south of Kirknewton (Ibid.). The recent survey on the lower slopes of Yeavering Bell demonstrates the potential complexity of earthwork evidence and points to the survival of multi-period features of Bronze Age to medieval date, as well as occupation evidence of late Iron Age and Roman Iron Age date and medieval shielings (Ainsworth *et al.* 2016). A more expansive programme of fieldwork, specifically focused on targeted small-scale excavation, could be beneficial and could build on existing results.

To date, the quest for an early medieval upland landscape amidst the earlier relics of the prehistoric landscape has proved challenging and largely unfruitful. Where excavation has been undertaken within the various settlement types of prehistoric date, firmly datable evidence for any post-prehistoric phases encountered have indicated only rectangular stone structures of later medieval date. Radiocarbon dates from a cultivation terrace at Ritto, and upland boundary features at Wether Hill and Little Haystack (all in the Breamish valley), support the idea, however, that activity extended to some of the uplands in the early medieval period, although it should be noted that the Ritto date is from a potentially contaminated context (Frodsham and Waddington 2004: 181; Passmore and Waddington 2012, 289; P. Carne *pers. comm.*).

There is an opportunity to use a GIS-based assessment of settlement activity of all dates, in conjunction with a programme of applied work at sites of different dates, to begin to tighten up understanding of the chronology and morphology of settlement activity from prehistory to the medieval period across the lowlands and uplands. Others have already made significant headway in this regard (e.g. Passmore and Waddington 2009; 2012; Oswald *et al*. 2006; Oswald *et al*. 2008). In particular, useful comparative material regarding the

morphology and chronology of earthwork types can be drawn from the then RCHME's *South-East Cheviots Project*, which comprised photogrammetric aerial survey of this area of the Cheviots in the 1980s (see Topping 2008; Topping and Pearson 2008, though these only synthesise prehistoric features under study in the survey area).

The methodology employed by Stuart Ainsworth, Tim Gates and Al Oswald in their 2016 landscape survey, summarised above, could be expanded to a greater area of the upland landscape. This has already been undertaken within the College Valley estate, on the south-west edge of Zone B (Topping 1981a; 1981b; 1983; 1991; 2000). Some exploratory excavation work might also be in order, however, particularly with a view to obtaining dating material. In recent years, rectilinear settlements on the Northumberland coastal plain and equivalent stone-built enclosed settlements in the uplands have been found to have a longer duration. There is clear evidence now that both forms were present in the late Iron Age (see Hodgson *et al.* 2013 for coastal plain and Oswald *et al.* 2008 for upland sites. See also the Ingram and Upper Breamish Valley Landscape Project; Adams 1993; 1994; 1995; Adams and Carne 1996). Work on the rectilinear settlements of the coastal plain also underlines their cessation well before the early medieval period. These new insights are forcing a significant rethink of the traditional models of lowland and upland land-use and settlement. The same approach could be taken to settlement forms and crop-marks on the gravels and sands, with a targeted approach involving geophysical prospection and excavation.

A particular type of upland site that may be worthy of further field investigation are the so-called 'scooped enclosures' visible on the downslopes of the Cheviot Hills. These earthworks are little explored but are thought to have been used as stock enclosures (Burgess 1970; Jobey 1962). While evidence of early medieval upland activity is absent in the Cheviots, largely because upland enclosures are typically identified as Iron Age, late Iron Age or Roman Iron Age in date, 'scooped enclosures' remain enigmatic and poorly dated. While they are generally considered to have ended in use in the Iron Age/Roman Iron Age periods, it is possible that they continued to serve early medieval populations. One example at College Burn and West Hill is known to have operated as a medieval shieling (Jobey 1962; Oswald et al 2006). Meanwhile, the scooped settlement excavated by Colin Burgess at Hetha Burn, south-west of Hethpool, was accompanied by a shieling in its courtyard area (Burgess 1970).

Excavated sites at Thirlings, Lanton Quarry and Cheviot Quarry have begun to reveal the populated hinterland to the palace-complex, offering insight into the lifeways of 5th-/6th- and 7th-century communities in the Milfield Basin as a whole (Gates and O'Brien 1988; Gates 2009; 2012; O'Brien and Miket 1991; Passmore and Waddington 2009; 2012). The retrieval of dating from both Lanton and Cheviot Quarry, suggestive of 5th/6th-century activity, is particularly important as it places early medieval settlement on the gravels before the traditionally documented dates for an Anglo-Saxon presence in the Milfield Basin (Johnson and Waddington 2008; Waddington 2009).

Along the river valleys are numerous other settlement sites suggested by the identification of sunken-featured buildings on aerial photographs along the Till/Tweed valleys (Gates and O'Brien 1988; Gates 2009; 2012; Waddington 2009) (Fig. 9). Hall-type structures have

also been identified, though the recent re-dating of the hall structure identified by Hope-Taylor at Doon Hill, East Lothian, now suggests the site is entirely prehistoric in its development (pers. comm. I. Ralston). These settlement types range from high-status 'palace' complexes that operated as nodal centres for gatherings, down to the smallest settlement units of perhaps a few small rectangular buildings, some of which were clearly fulfilling industrial functions. This accumulated evidence presents a picture of a busy landscape, with communities exploiting the fertile soils of the plain for cultivation (Fig. 9). Many of these smaller sites have yet to be tested in terms of excavation, although at New Bewick and Cheviot Quarry features were corroborated as sunken-featured buildings (Gates and O'Brien 1988; Waddington 2009). A programme of exploration using geophysical prospection and excavation could create a more detailed and extensive understanding of the date and extent of these small settlements and the relation to Yeavering, Milfield and each other. The pilot geophysical work at Yeavering demonstrates that combined prospection, using resistivity (with magnetometry and Ground Penetrating Radar), can reveal increased detail along the sands and gravels. If combined with detailed study of aerial photographic evidence, and LiDAR data, a more comprehensive understanding of the density of early medieval activity in this zone could be achieved. In addition, field excavation might fully reveal the developing nature of post-Roman Iron Age/early medieval settlement along these river-valleys and ultimately the workings of the palace at Yeavering in relation to its environs and the wider population in the 5th/6th and 7th centuries.

Finally, the relationship of the palace at Yeavering to its successor at Milfield, is in need of exploration. The Milfield henges were active as places of burial in the 7th century, while *Ad Gefrin* was at its zenith (Scull and Harding 1990). Just as Sam Lucy has suggested activity at Yeavering might continue after the 8th century (2005), it is feasible that the inception of early medieval activity at the Milfield palace site is earlier than Bede suggests (HE II, 14). The extensive cropmark indications of settlement at Milfield, including sunken-featured buildings, and the more elaborate hall complex and large enclosure, have only been preliminarily mapped (Gates and O'Brien 1988; Scull and Harding 1990). Significant excavations took place at Milfield West and identified a post-built structure and fence/boundary, providing a calibrated radiocarbon date of AD 680-890 (Passmore and Waddington 2009, 251–9). Further investigations at both sites could provide insight into their relationship and perhaps, clues as to why *Ad Gefrin* declined. Recent geophysical survey at Milfield has been undertaken by Patrick Gleeson of the Queen's University Belfast. Finally, there is the question of when Milfield also ceased to function as a royal residence, and the light this might throw upon the broader political situation in early medieval Northumbria.

3.2 Cemeteries

Funerary evidence is evident in the Milfield Basin as early as the Neolithic. While much has been done to explore and map the prehistory of the Milfield Basin, some forms of funerary monument have received relatively limited archaeological attention. Neolithic round

mounds are a feature in the region, but few have been excavated in modern times and long mounds too remain a possibility for further survey and fieldwork: two cropmark sites east of Yeavering henge may represent the ploughed out remains of long mounds or mortuary enclosures (McCord and Jobey 1971, 120, pl XII, no 2). Field-walking and geophysics on selected cropmark sites would sharpen current understanding of the type and date of potential features.

The recent upland survey on the southern slopes of Yeavering Bell produced evidence for a range of prehistoric features, including traces of a Bronze-Age cairn cemetery. The extension of LiDAR review to the remainder of the Zone B uplands, and the targeted excavation of previously surveyed sites, would provide greater detail on the extent of surviving prehistoric evidence for funerary monuments in the upland, complementing lowland survey.

While little is known of the disposal methods for the dead in the Iron Age in the region, or indeed of less structured mortuary disposal in earlier periods, a number of post-Roman/early medieval cemetery sites are known in the broader region of north Northumberland, and several more may be signalled by findspots (Miket 1980; Lucy 1999; 2005; Collins 2010; Semple *et al.* 2017) (Fig. 9). While much of the osteological material recovered from the gravels of the area has been poor, we know that some fragmentary bone was recovered from the cemetery at Yeavering and much better preservation is evident at the Bowl Hole, Bamburgh (Groves 2011). Although such cemeteries are also usually relatively poor in terms of grave goods, aspects such as grave orientation, cemetery layout, cemetery location and even grave size, can all still help advance our understanding of the lives and deaths of early medieval populations. *People and Place. The Making of the Kingdom of Northumbria* (www.mappingnorthumbria.com) is currently undertaking a complete reappraisal of all known funerary evidence across the entire area once defined as the Northumbrian kingdom. Assemblages and human remains from sites such as Howick Heugh in Northumberland are being revisited and reassessed, and where possible AMS dating and isotopic analyses are being undertaken. Opportunities for investigating settlement-cemetery complexes are also presented by the aerial photographic evidence for likely early medieval complexes at Sprouston and Philiphaugh (Young *et al*. 2004, 100–118). At the very least, geophysical prospection, with resistivity or using combined methods, could bring a sharper focus to current understanding of the layout and organisation of these complexes and their associated cemeteries.

3.3 Environmental

Considerable geomorphological work has already been undertaken in the Milfield /Till-Tweed Valley (Passmore et al. 2002; Passmore and Waddington 2009; 2012; see also Tipping 1996; 2010). This has involved investigation into the Quaternary history and Holocene environments of the region (Ibid.) and has prioritised the valley floor environment where concentrations of prehistoric and early medieval activity have been identified. Geoarchaeological mapping has also been extended to include the surrounding valley sites and hilltops (Passmore and Waddington 2009, 11).

Waddington and Passmore have also demonstrated that considerable expanses of the alluvial valley floors of the lower Tweed and Till host sedimentary sequences that date back to the earliest Holocene. However, narrow stretches preserve only young alluvial sequences that usually post-date the Iron Age (Ibid, 74). Mapping of the landform elements of the Holocene epoch offers insight into areas where early environmental sequences may be accessible (Fig. 7). Further consideration of aerial photographic evidence, alongside walk-over survey and auguring would be beneficial in creating a more detailed map of potential areas where geoarchaeological investigation could take place. The acquisition of new geoarchaeological and palaeobotanical samples in Glendale should be treated as a priority.

3.4. Routes and communications

The Roman road known today as the Devil's Causeway runs along the north-south trending sandstone escarpment forming the eastern margin of the Milfield Basin and continued as a major route into the later medieval period. Within the Basin itself, the pattern of communications historically was dictated by its topography which, in the case of the plain, was subject to the capriciousness of the rivers Glen, Till and Wooler Water. The aerial photographs reveal a complex pattern of watercourses in a continuous state of flux, one that continues to seasonally dictate and guide movement across the lower, incised channels that dissect the higher gravel terraces, and one that has had a decisive influence on events in the valley, such as the Battle of Humbleton in 1413. It is a situation that generally has restricted settlement across the plain to the gravel terraces and placed a premium upon crossing points less vulnerable to the rivers' volatility. Recent assessment of the early medieval evidence across the plain using a Geographical Information System (GIS), suggests that settlements and cemeteries were located at optimum points on the gravel terraces where routes bisected the historic floodplains (Semple *et al.* 2017).

The scattered evidence along the river valleys for connected small early medieval communities demonstrates that there is scope to explore the development of these early medieval communities as a connected network, rather than discussing them isolation. The suggestion of long-distance drove routes (Jones and Coquetdale Community Archaeology 2017), a 'coastal highway' (Ferguson 2011), upland-lowland transhumance routes (Semple *et al*. 2017), and royal itineraries (Rollason 2003), are all themes which require further exploration to situate Yeavering better in its long-term landscape. There is now an opportunity to use a Geographical Information System as a digital environment in which to plot and test multi-period activity over time in relation to land-use and land routes. This has already been partly achieved during the Pilot Phase of data gathering and research that underpinned the Resource Assessment (Semple et al 2020). The integration of LiDAR and PAS data, historic map data and aerial photographic images, offer the best chance to explore the nuance of activity and mobility in the Milfield Basin over time. Recent exploration of movement in this landscape using GIS techniques underscores the idea that long-term traditions of upland and lowland exploitation shaped settlement patterns in this region (Ibid.)

4. Potential of the Resource

We would argue that Hope-Taylor's excavations and his detailed report provide a 'route map' for revisiting the palace site, its assemblages and hinterland with the benefit of new modern techniques for survey and for intra-site analyses. The development of geophysical survey techniques, and clear evidence of their successful applications on the Milfield gravels, opens up the possibility of both on-site and off-site survey. The success of multi-spectral aerial photograph techniques and the potential of free LiDAR data, both present further research possibilities. The recent survey work on the hillfort and its south-eastern slopes by Ainsworth *et al*., also underscores the potential for additional close-grained walkover surveys, and selective excavation in the broader hinterland. We therefore propose a series of research priorities, predicated on Zone A (the gravel terrace and near environs) and Zone B (the broader hinterland) (Fig. 1).

While Yeavering and its neighbour Milfield are iconic locations and significant enough to warrant close protection, survey and selective excavation at both would advance our understanding of the long term development of human activity in the Milfield Basin. At Yeavering in particular, further field investigation in Zone A, revisiting previously excavated sequences, could also provide important resolution on the chronological development of the palace site. This targeted work on-site might be combined with broader geophysical survey in Zone A, in adjacent fields, and the use of LiDAR and targeted walk-over survey in selected upland areas, allowing a more intensive characterisation of activity on the gravel terrace and in its immediate environs. The surviving finds assemblage offers another starting point. Reassessment of some classes of material could be combined with the work in Zone A. Surviving assemblages from neighbouring sites, e.g. Thirlings, Lanton Quarry and Cheviot Quarry etc., offer the chance of comparative materials analyses.

Research on Zone B would need to be more targeted in terms of specific period-based research questions. However, expanded use of tested geophysical techniques over a larger area of the gravels would be beneficial for our understanding of prehistoric and early medieval activity. Assessment of crop-mark or geophysical evidence by means of field-walking and metal-detecting on ploughed fields would also be effective. Likewise, use of LiDAR and close-grained walk-over survey could be used more expansively on the upland zone in areas that presently lack suitable survey coverage. A GIS would be crucial and in early medieval terms, research could take account of little-mined datasets including field and place-names (though see O'Brien 2002).

In addition, there are several complementary major new projects on neighbouring early medieval sites that present opportunities for expanding any comparative work on the Yeavering assemblage. The on-going work at Bamburgh and the new excavations at Lindisfarne, as well as the recent published sites of Cheviot Quarry and Lanton Quarry, all present opportunities for comparative analytical work on ceramics, glass, metalwork and other classes of material.

While research and fieldwork in relation to both zones would be of significant value, the work proposed in Zone A, on the site of Yeavering itself, offers the possibility of maximum results from relatively small-scale and minimal exploration in a short time-frame, if work

was targeted on existing features known from previous excavations with the priority of gaining new dating evidence. However, the broader range of survey, mapping and fieldwork proposed in Zone B, which would need to take place over a number of years, could provide exceptional resolution in terms of understanding patterns of human settlement and activity within the region in the long-term. It would, in particular, sharpen understanding of the date, extent and development of early medieval activity in the lowland and upland and along the river valleys, in relation to the known larger settlement sites of the region, many of which have been or are currently under investigation. Thus, work in Zones A and B have equal value, but would produce different kinds of results, both beneficial. The kinds of survey and field-work proposed for Zone B also have the greater potential for community involvement.

A new research agenda for Yeavering can be considered timely. Both NERFF and the Northumberland National Park Research Agenda are being revisited and a new research framework for South East Scotland is also in development. The availability of Waddington and Passmore's work, in published and data form, provides an excellent basis for broader landscape exploration. Access to free LiDAR data in England is another major positive. The completion of the Bamburgh Bowl Hole project, the Lindisfarne Project and the *People and Place* Leverhulme-funded project, on burial and landscape in Northumbria, also offer broad comparative projects and results that will benefit any further work in the Yeavering/Milfield region.

In summary, there is rich potential for bringing new techniques to bear on the palace site and on its broader catchment zone, using a GIS platform that encompasses Yeavering Bell and the upland, as well as the river valleys. By integrating and assessing new data sets, initiating new large-scale survey using tried and tested techniques, coupled with selective excavation, there is now every opportunity to examine the archaeological afresh from an holistic perspective.

5. Key Research Priorities: Zone A

5.1 The post-excavation archive

The reuniting of the entire assemblage for the excavations of Yeavering presents a number of opportunities for new and more advanced investigations. The full assemblage is currently located in the Department of Archaeology at Durham University undergoing further cataloguing and assessment. A primary objective is a comprehensive catalogue, followed by the spatial mapping of finds in relation to the excavation plans and excavation matrix to reunite finds, where possible, with their original find-context. Once complete, key priorities include:

i. Archive work and analysis of the photographic record to establish the locations of key finds e.g. daub, charcoal, nails and other fittings from buildings.
ii. The surviving charcoal, human and animal bone together present the opportunity to undertake a comprehensive C^{14} dating programme. The charcoal,

human and animal bone require initial assessment and cataloguing and species identification. A scientific programme involving dating and isotopic analyses can then be planned, funded and executed.

iii. Assessment of the daub fragments and related 'building-materials' with particular attention paid to any organic materials preserved within.

iv. A full re-assessment of the ceramic assemblage is needed (although see Ferrell 1990). This should embrace applied methods that can help evaluate fabrics and the opportunities for comparative work with other more recently recovered assemblages. Millson's review of Neolithic and Bronze Age ceramic assemblages in the Tyne-Forth region is particularly important in this respect (Millson 2007; 2013; Waddington et al 2011). Analysis of the surviving post-Roman fabrics, together with comparative work on existing late Roman and Anglo-Saxon finds, such as those from Bamburgh, Lanton Quarry, Cheviot Quarry or Ingleby Barwick, would also be of value. The ceramic assemblages should also be subject to residue analysis that could provide insights into diet and livestock rearing.

v. The small collection of ironwork and copper alloy items also deserve a full reassessment (and the very few glass objects as well). Recording, x-rays and drawings are needed, and comparison with both regional and national finds assemblages to re-evaluate some of the original identifications. Finds of metalworking residues from Lanton Quarry (Waddington 2009) nearby also offer the potential for comparative work, as do the more substantial metalworking remains at Bamburgh (Bamburgh Research Project 2018). There are mineralised textile traces as well of textiles on some of the metalwork items which should be assessed.

vi. Finally, the evidence of metalworking from Harding's excavations comprises a range of crucible fragments with residues which could now be revisited with new techniques (Tinniswood and Harding 1991).

5.2 On-site re-assessment of the chronological sequence

Hope-Taylor, based on his excavations to the north of the modern road, argued for five phases of activity encompassing the expansion and contraction of the palace site, largely around hall-complex A, as well as a shift in ritual focus from west to east (Hope-Taylor 1977, see figs. 73-9).

It is generally accepted that the Great Enclosure is one of the most crucial components of the palace site; however our understanding of every aspect – structure, sequence, chronology, purpose – is both minimal and ambiguous (see O'Brien 2005). The phasing published by Hope-Taylor relies particularly on the complex arrangement and sequence of activity in Hope Taylor's Area B, where the Great Enclosure is shown to fall eventually from use, as burial activity expands around the proposed 'church' (Fig. 4). Pilot work by the Trust has also revealed additional structures and features within the enclosure, as well as overlapping its southern lip (see above and Fig. 5: B). This new evidence brings into

question the life-span of the enclosure and suggests further potential activity in the east, linked perhaps to an 8th-century cemetery, following Lucy's suggestion. Re-assessing the developmental sequence of the Great Enclosure also encompasses a need to investigate the recognition of a likely earlier, double-ditched enclosure, visible within the great enclosure (Fig. 5: A).

Hope-Taylor's excavations revealed *in situ* burned deposits relating to Structure E and photographic evidence from the archive demonstrates the survival of carbonised timbers in structure C1. Should residues of these survive, there is the possibility of recovering samples for dating. Should timbers survive then dendrochronology may be appropriate as well as radiocarbon dating, while the use of archaeomagnetic dating might also be viable in the event that there is evidence of furnaces or metalworking activity.

Building B is the only building that Hope-Taylor did not excavate in its entirety, and from which datable and environmental material from structural elements and the trench fill remain available for recovery. Moreover, this is sequentially late in the palace site's history, possibly even one of the last buildings of the final phase and therefore potentially one of the most informative elements of the site. In light of Lucy's proposition that this part of the palace site may have continued in use in some variant form into the 8th century (Lucy 2005), Building B could be targeted for the recovery of datable material, as would one or two of the graves from the cemetery that abuts it.

Finally, the poor survival of human and animal bone from the excavations poses the question as to whether additional excavation in Area D would not be beneficial. The recent discovery on multi-spectral aerial images of potentially two new henge- /ring ditch-features in this area (Figs. 3 and 5: F), which could relate to the spatial layout of the western cemetery, is another prompt for further survey and excavation in this part of the gravel terrace. Furthermore, the geophysical results hint at the presence of a further rectangular structure in the same immediate area (Fig. 5: F). Although quarrying has removed a number of the features excavated by Hope-Taylor to the west of the main palace complex, aerial photographic evidence and geophysical results show that traces of structures D1 and D2 survive. Burial activity occurred from the earliest phases here, in relation to the western complex, but the full extent of funerary activity was not interrogated in its totality.

Air photographs and geophysical survey corroborate the presence of further multi-period features south of the road (Figs. 2 and 5: D and E). Harding's excavations here targeted a henge, recognised from aerial photography (D). The metalworking around the henge complex is considered to be broadly Anglo-Saxon in date but no precise scientific dating was attempted (Tinniswood and Harding 1991, 93-108). Post-built fences or screens are associated with this metalworking evidence and the excavated ditch fill of the henge produced evidence for a tertiary fill/spread of burned soil and charcoal (ibid. 97).

Additional early medieval halls are evident on this side of the road (Fig. 5: E), together with a large broken-ditched circular enclosure on the far south-eastern edge which is likely prehistoric in date. It is assumed the metalworking activity and additional rectilinear hall-type structures are broadly contemporary with activity to the north, but this remains entirely untested. All features south of the road could remain untouched, although the opportunity to test and date the hall-type structures would further refine the post-Roman

chronology, and present opportunities for new discoveries and analyses using techniques that were not yet developed in the 1950s and 60s. Another possibility is to open up a section through the henge, to access, re-assess and date some of the debris and deposits associated with 'Anglo-Saxon' metalworking activity.–Further testing of the potential prehistoric features, notably the large, broken ditched enclosure, could also add further additional insight into the time depth and complexity of prehistoric activity here on the gravel plateau.

There are also options for geochemical work on the gravel terrace which might offer information on the types of activity that have taken place, such as metalworking, or whether specific areas were associated with stock, such as the Great Enclosure.

Key priorities, therefore, include small-scale excavation, targeting (Fig. 10)

i. Hope Taylor Area B(1). Surveys would be used to pin-point the trench edges and baulks. A small-scale trench could be opened to facilitate access to the burned material in the sequence of the Great Enclosure. Samples would be taken for dating, geochemical and palaeobotanical analyses. Depending on the proximity of the trench to the cemetery, there is also the possibility of opening up adjacent graves with a view to recovering skeletal material for dating but also for further bioarchaeological analyses.
ii. Hope Taylor Area B(2). The unexcavated southern sweep of the Great Enclosure, including the traces of an earlier and smaller enclosure within (Fig 5: A). This trench would take in the double palisade structure that appears to overlap the lip of the Great Enclosure (Fig 5: B). Recover a similar range of samples from the foundation trench of Building B and associated graves for dating and environmental analysis.
iii. Hope Taylor Area C: Building C1. Relocation of the sunken-featured building and re-excavation to establish whether carbonised material survives for dating. If the charred timbers remain (see Fig. 11), then radiocarbon dating as well as dendrochronology are options. Further test-pitting or longer trial trenches could be used in Area C to test out the funnel shaped feature and the associated high resolution 'platform'.
iv. Hope Taylor Area D: the complexity of this grouping of structures and associated burials is now further complicated by the discovery of one or more new henge-like features and another putative hall. These lie adjacent to the second cluster of burials in Area D. Again excavation is proposed here – but of a more open-area nature – to reveal and test the circular features and rectangular structure, to test their relationship with the cemetery and the structural elements of the early medieval site and to reveal further burials which might, depending on their survival, offer up new remains for osteological, palaeopathological and isotopic analyses.
v. Hope Taylor Area E: south of the road. Proposed sample excavation of one or both hall-type structures. Re-excavation of a slot through the henge to re-access the metalworking debris and fills of the henge ditch.

5.3 Relationships with Milfield

The story of *Ad Gefrin* is intimately linked through the words of Bede to the neighbouring 'royal' site of *Maelmin* at Milfield. His words imply the relocation of the royal administrative function to Milfield in the 8th century.

It has been argued (Bradley 1987) that they are connected by a route, defined in part by two narrow ditches and known as 'the Avenue' or 'Droveway', but the date, purpose and extent of this linear feature remain enigmatic – it may indeed be of prehistoric date (Waddington 1999; Passmore and Waddington 2012). Some resolution of this landscape feature is highly desirable.

While further investigation is needed at Milfield (see below), from an intra-site perspective, a priority must be:

i. To make use of LiDAR data, retrogressive analysis, geophysical survey and even excavation to test the conjectural route of this drove and its physical connection with the plateau at Yeavering. Preliminary pilot work by the Trust has picked up features that may relate to its crossing point on the Glen.
ii. Small-scale geophysical survey has recently been conducted by Patrick Gleeson at the Milfield site itself. These results should be evaluated and fed in to larger scale geophysical survey of the putative palace complex and its environs.
iii. Dependent on the results of large-scale geophysical survey, selected features within the complex should be targeted for small-scale excavation, whose primary objective will be the acquisition of dateable material for analysis.
iv. Comparative reassessment of finds from Milfield and its environs, i.e. the Milfield Henges and Kimmerstone Road End (Harding 1981; The Archaeological Practice 1999).

5.4 Environment

To the south of the road, a possible palaeochannel is evident, bordering the south-western edge of the gravel plateau (Fig. 2), while below to the north of the road, extensive medieval and post-medieval earthworks are visible on the flood plain suggestive of water meadows (Fig. 12). There are therefore opportunities in the immediate area of the gravel terrace for sampling to establish if useful sequences or deposits survive.

i. Preliminary coring to test preservation of deposits around the gravel terrace and explore the likelihood of pollen survival.
ii. Use detailed geoarchaeological mapping, LiDAR and retrogressive analysis to determine areas of likely pollen survival in the near environs and hinterland of Yeavering.
iii. The apparent charring of timbers and the evidence of other burning across the site present in the Hope Taylor excavations, means that plant macrofossils may survive within the preserved archaeological deposits at Yeavering. Thus, any

new small-scale excavation has the potential to allow the recovery of new material of this kind if a rigorous sampling strategy was in practice.

iv. To look for evidence that might reveal what was happening here in the period between the demise of *Ad Gefrin* and the 11th/12th centuries AD.

5.5 The Hillfort

Pilot work on behalf of the Trust by Stuart Ainsworth, Al Oswald and Tim Gates, has demonstrated the extensive survival of late Iron Age and Roman Iron Age enclosures, settlement evidence and prehistoric cairn fields to the south and south east of Yeavering Bell on the lower slopes (Ainsworth *et al*. 2016; see too Figs. 6 and 12). This has also underscored assumptions of an early cessation of activity on Yeavering Bell itself in the Iron Age, thus critiquing ideas of continuity into the late Iron Age/Roman era.

The accessibility of LiDAR data also offers an unrivalled resource with which to explore multi-period activity in the wider Cheviots and lower slopes and across the valley bottoms, but is especially relevant to identifying activity and occupation in and around the hillfort at Yeavering Bell.

A number of priorities can therefore be identified:

i. Further close-grained survey work on the remaining upland scarps of Yeavering Bell, to complement existing survey undertaken by Ainsworth, Oswald and Gates.

ii. Testing, through small-scale excavation, a selection of features and enclosures, with the aim of extracting dateable deposits. Micromorphological and geochemical analysis may also be conducted, dependent on what is found.

iii. Phasing of these features, based on the above interventions and post-excavation analyses, to greater elucidate long-term activity on and around Yeavering Bell between the later prehistoric and medieval periods, particularly with regard to upland exploitation in the immediate post-Roman period.

iv. Small-scale excavation within Yeavering Bell hillfort, including on those areas already tested by Hope-Taylor, to investigate whether dateable deposits survive and, in particular, to resolve the question of an end-date for activity on the hillfort and crucially, to establish the date of the polygonal palisade on its eastern crest.

5.6 Short-term and long-term developments after Ad Gefrin

A number of opportunities exist to investigate later developments and the close of activity at the palace itself. Even more exist to characterise the after-life of the palace and its near surrounds, through into the 19th century. While other research priorities overwhelmingly concern field initiatives, identified objectives in this section include both active interventions and significant desk-based research.

i) Targeted excavation and retrieval of dateable material both from selected areas of Hope-Taylor's previous excavations and newly excavated structures identified from aerial photography and geophysical survey;
ii) Geophysical survey of Yeavering deserted medieval village, to be followed with targeted excavation if appropriate;
iii) Geophysical survey of the lowland landscape around the Yeavering palace site, including all the area between the palace and the present village of Kirknewton;
iv) Geophysical survey within Kirknewton churchyard, with potential for targeted test-pit excavation with the village itself;
v) Extended review of available mapping for Glendale, comprising later medieval plans through to the extensive series of tithe maps available for the 19th century.
vi) Review of place-name evidence in the Milfield Basin, complementing the above-proposed map-work;
vii) Review existing and emerging historical material and update the information from Vicker's 1922 *History of Northumberland* volume for Kirknewton parish as a starting point, extending this to the Milfield Basin as a whole if resources allow;
viii) Targeted historical review of border warfare, border reiving, droving and agricultural improvements, among others;
ix) Historic building recording of vernacular architecture in Glendale.

6. Key Research Priorities: Zone B

6.1 Settlement activity

As set out in the *Resource Assessment* (Semple *et al*. 2020), there is a wealth of evidence on the lowland, particularly on the gravels and in the upland for human activity of all dates. On the gravels and plain, cropmarks attest to a number of Iron Age/Roman Iron Age enclosures and in recent years survey and sampling has created better understanding of their date and function (Oswald *et al*. 2006; Hodgson *et al.* 2013). In terms of the uplands, the sandstone ridge in the north-east of Zone B has seen less attention than the Cheviots (though see Waddington 1998), but both areas of upland would benefit from the use of LiDAR and walk-over survey to map and characterise surviving low earthwork features. Thus, from a multi-period perspective, there is the potential to map, survey and test a selection of cropmark and earthwork sites, by means of appropriate targeted techniques,

and perhaps use small-scale excavation to audit their date and function. Particularly with regards to the Cheviots and the sandstone ridge, it is possible that this kind of targeted upland work could also produce early medieval dates and evidence. Thus a broader programme of survey, combined with some testing through excavation, would facilitate an understanding of the landscape hinterland of Yeavering in its late prehistoric phase and perhaps deliver evidence of early medieval activity, other than the unenclosed settlements evident on the sand and gravels.

Another potential priority in terms of understanding long-term settlement patterns is to test out the so-called 'scooped settlements'. Based on limited excavation evidence, such as Burgess's work at Hetha Burn (1970), these monuments are placed between the mid-Iron Age and the early centuries of the Roman Iron Age (although Burgess does note morphological similarities at Hetha Burn with roundhouses of Bronze Age date). They appear to be related to the management of animals, and perhaps represent seasonal upland steadings. Their high density on the lower slopes of the Cheviots above the Glen-Till confluence, points to their vital contribution to subsistence and agrarian practices in the Roman Iron Age, if not earlier.

At College Burn and West Hill, LiDAR data and on-the-ground survey have identified a medieval longhouse tucked within, and presumably still utilising, the remains of a scooped enclosure, similar to one noted from Burgess's (1970) excavations at Hetha Burn (Fig. 13). This offers tantalising evidence for their continued importance as seasonal places of stock management even in the early medieval period.

More specific to questions of early medieval settlement, although several early medieval settlements have been excavated and two major on-going projects exist outside Zone B (Bamburgh and Lindisfarne), little advance has been made in trying to understand this remarkable collection of high and low status settlements as a network or hierarchy of sites. They have largely been considered in isolation, though Alcock's proposal (1988) of a royal hierarchy of *civitas*, *urbs* and *villa/vicus* has been reviewed by Passmore and Waddington (2012: 298) in light of the settlement nodes of North Northumberland, albeit primarily within a broader argument for the appropriation of earlier British centres of power. Gates and O'Brien have pointed to the evidence on aerial photographs for sunken-featured buildings scattered along the Till-Tweed tributaries and in recent years new settlements have been identified and excavated at Cheviot Quarry (Passmore and Waddington 2009; 2012) (see Fig. 9). In the Till-Tweed project, these excavated sites have been contextualised in terms of landform evidence, geology, soils and resources but there are opportunities to expand this work and survey and test the more extensive early medieval settlement evidence on the sand and gravels. The inclusion of cemetery evidence alongside is also vital. In recent years, via metal-detecting, more finds have come to light in the Milfield Basin that could indicate cemetery activity of 6th-century date (Collins 2010). As we have seen at Yeavering and Milfield and at other locations, settlements and cemeteries are allied spatially. Significant advances have already been made in regards to cemetery evidence by Durham University where the *People and Place* Leverhulme-funded Project is already undertaking an in-depth spatial interrogation of the entire funerary dataset for the early kingdom of Northumbria (www.mappingnorthumbria.org). This data can be easily imported into the GIS for Zone B and more nuanced spatial mapping can be used to explore

patterns of settlement and land-use over time. Where surviving assemblages allow, refined dating and isotopic work can also be undertaken. Further datasets of value here include field and place-names and the evidence for later administrative and parish divisions. Collaboration with the English Place-Name Society and the GB1900 project (www.gb1900.org) would be beneficial, allowing integration of at the least, all place-names recorded at the turn of the 20th century. This could build on the existing examination of place-names and administrative patterns in the region by Colm O'Brien (2002), wherein he proposed that the later medieval Barony of Wooler comprised in part a fossilised remnant of an earlier medieval polity he termed 'Gefrinshire'.

Opportunities also exist for comparative work with finds assemblages relating to Thirlings, Lanton Quarry, Cheviot Quarry and even Bamburgh. Broader assessments of the metalwork and ceramics from all early medieval sites in Zone B, and perhaps even across the entire Milfield Basin and the coast, could provide opportunities for MA and PhD research projects.

Priorities therefore include:

i. Combined use of high-resolution LiDAR data alongside close-grained walk-over survey in areas of Zone B that presently lack coverage to identify and characterise shielings, 'scooped enclosures', other forms of potential upland occupation and activity, followed by excavation at selected sites to establish a better chronological understanding of their usage/life spans. Micromorphological and geochemical analysis will be a priority in these instances, in relation to the potential pastoral function of many of these features.
ii. Extended combined geophysical prospection across all the optimum gravels in Zone B. This extensive survey will include the Yeavering plateau again and Milfield. Magnetometry will be used, as will resistivity.
iii. Small-scale excavations at untested 'early medieval' crop-mark sites to obtain dating evidence, perhaps specifically targeting sunken-featured buildings and other potential features of small-scale rural settlement. The excavation methodology should again factor in micromorphological, geochemical and archaeobotanical analyses.

6.2 Environment

As noted above, relatively detailed geoarchaeological survey has been undertaken but opportunities are apparent from Waddington and Passmore's survey for further coring with a view to obtaining new pollen sequences (Fig. 7). It is important therefore to identify likely areas for sampling, such as palaeochannels, flood basins and buried land surfaces across the Milfield Basin, but also from mere deposits in the surrounding Cheviot and Sandstone hills.

6.3 Communications

Intrinsic to the research agenda for Zone B is a GIS platform. As noted above, this has already been in part developed by the Trust. It will enable close-grained assessment of the relations between sites, settlements and find spots over time, and permit the modelling of settlement development and hierarchies. Some initial modelling has already been undertaken of the potential routes connecting late Iron Age/Roman Iron Age and early medieval settlements and cemeteries. A noticeable aspect is the preponderance of early medieval activity on at the optimum places for crossing the watercourses and floodplain, suggesting that movement between the uplands and the valley floor was a vital aspect of early medieval existence (Semple et al. 2017) (Fig. 14). Given their unclear inception, it would be prudent to generate a GIS of historically attested post-medieval droveways throughout Zone B. This historical data can be augmented by predictive modelling, such as least-cost path analysis. Emily Fiocciprile's recent work on upland earthworks in the Yorkshire Wolds (2015) incorporated different path costs for humans, cows and sheep, an approach that should directly inform comparative work in the Cheviots. It remains to state that least-cost path analysis should also be undertaken in a riverine setting, as a means to gauge the varying navigability, and therefore communications with the coast, of the Rivers Glen and Till over time.

7. Summary

As noted in the opening section, this *Research Agenda*, developed by Durham University in partnership with The Gefrin Trust builds on the *Research Assessment* created and published by the same partners (Semple *et al*. 2020). It sets out the archaeological research and fieldwork potential of Yeavering and its hinterland. It has been created through consultation and dialogue with a range of stakeholders and regional specialists. The primary aim of the Trust in producing both documents is to lay out a research framework for future field- and desk-based investigations and projects that seek to understand the site of Yeavering in long-term perspective. The agenda is not prescriptive and should be open to revaluation and comment. It is designed as a guide to inform future lines of research and fieldwork, by the Trust, and other researchers and stakeholders and to aid in the long-term management of the site and its resource.

8. Bibliography

Abbreviations

HE Bede, *Historia Ecclesiastica Gentis Anglorum* (Sherley-Price 1968)

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FIGURES

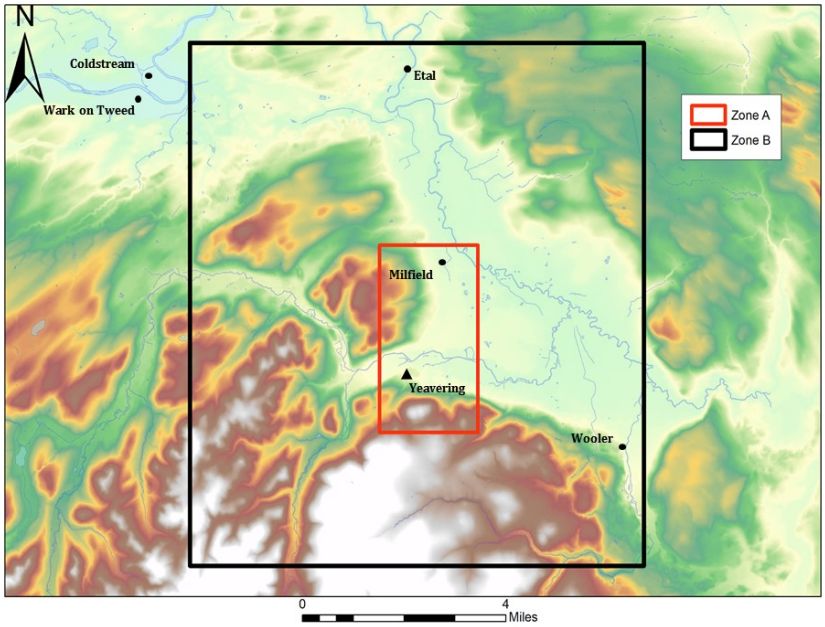


Fig. 1 Parameters for research area: Zone A – the site and its immediate environs; Zone B – the hinterland.

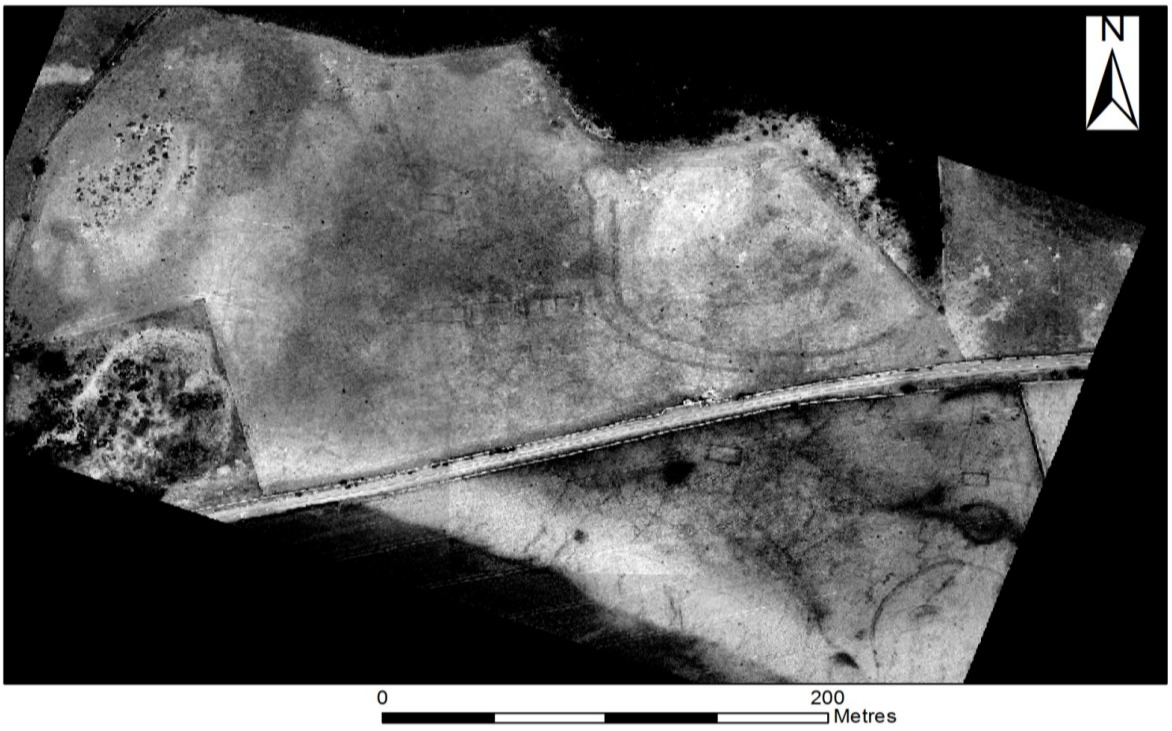


Fig. 2 Aerial photograph of Yeavering showing the cropmarks to the south of the road. Note the dark area marking the south-western edge of the terrace which appears to be a palaeochannel © Environment Agency.

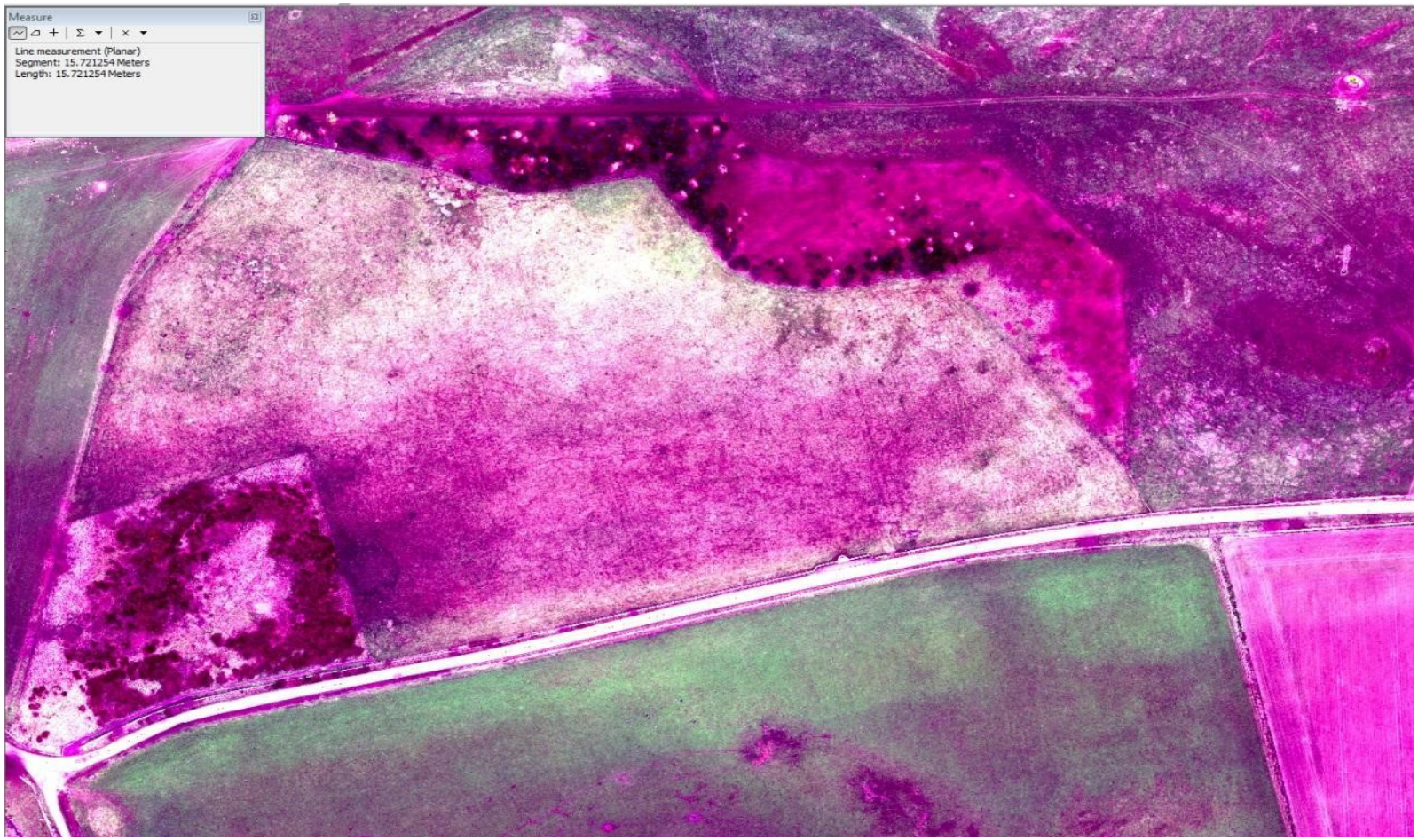


Fig. 3 Results of systematic aerial photography programme using a low altitude unmanned aerial vehicle (UAV) or drone by Darren Oliver March 2016. Note circular feature to the immediate east of the quarry boundary.

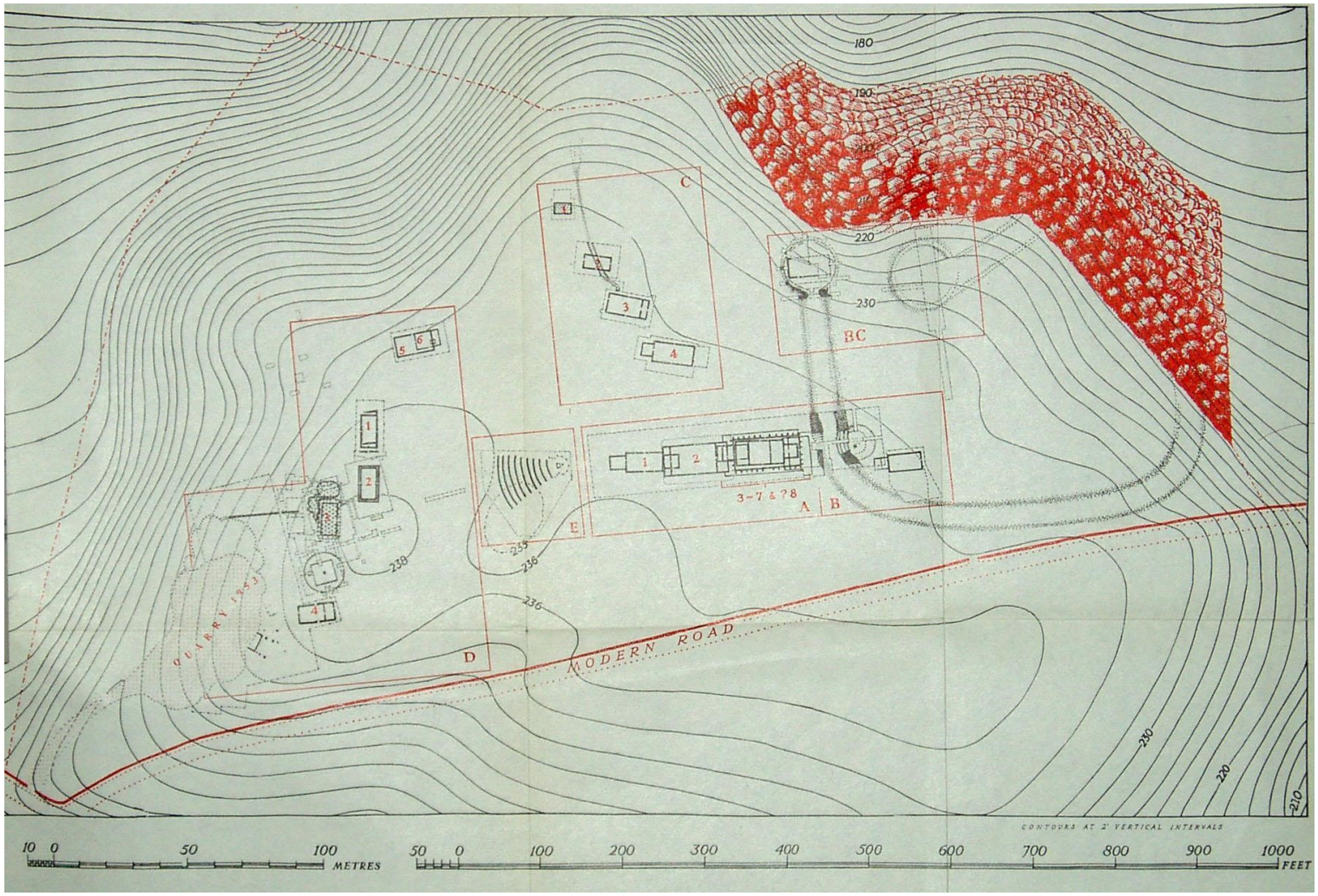
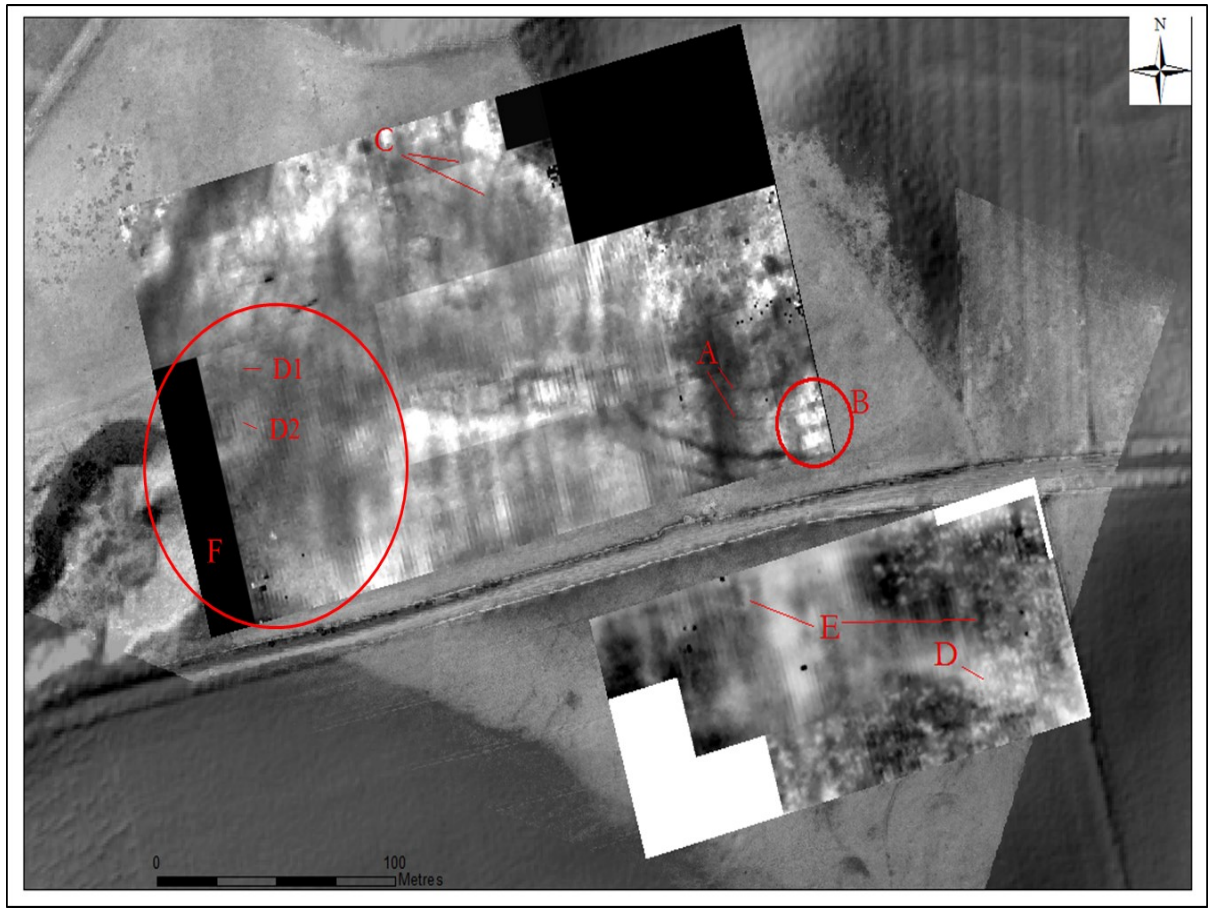


Fig. 4 Plan by Brian Hope-Taylor of the areas of excavation opened between 1952 to 1962 and associated features and structures (Hope Taylor 1977, fig 12). Funerary zones marked out in pale green.



Fig, 5 Resistivity survey conducted at Yeavering 2007-9. Features include A: smaller earlier double palisade enclosure; B: one or more rectilinear features, perhaps buildings, lying within the lip of the palisade enclosure; E: hall-type structures already recognised on aerial photographs; D: henge complex excavated by Harding (Tinniswood and Harding 1991); E: additional halls already recognised on air photographs (Gates 2005, fig 23); F: Halls D1 and D2 evident and immediately south a faint large circular feature can be discerned as well as poor traces of the circular feature identified by infrared photography immediately west. Between the two are faint traces of a rectangular structure.

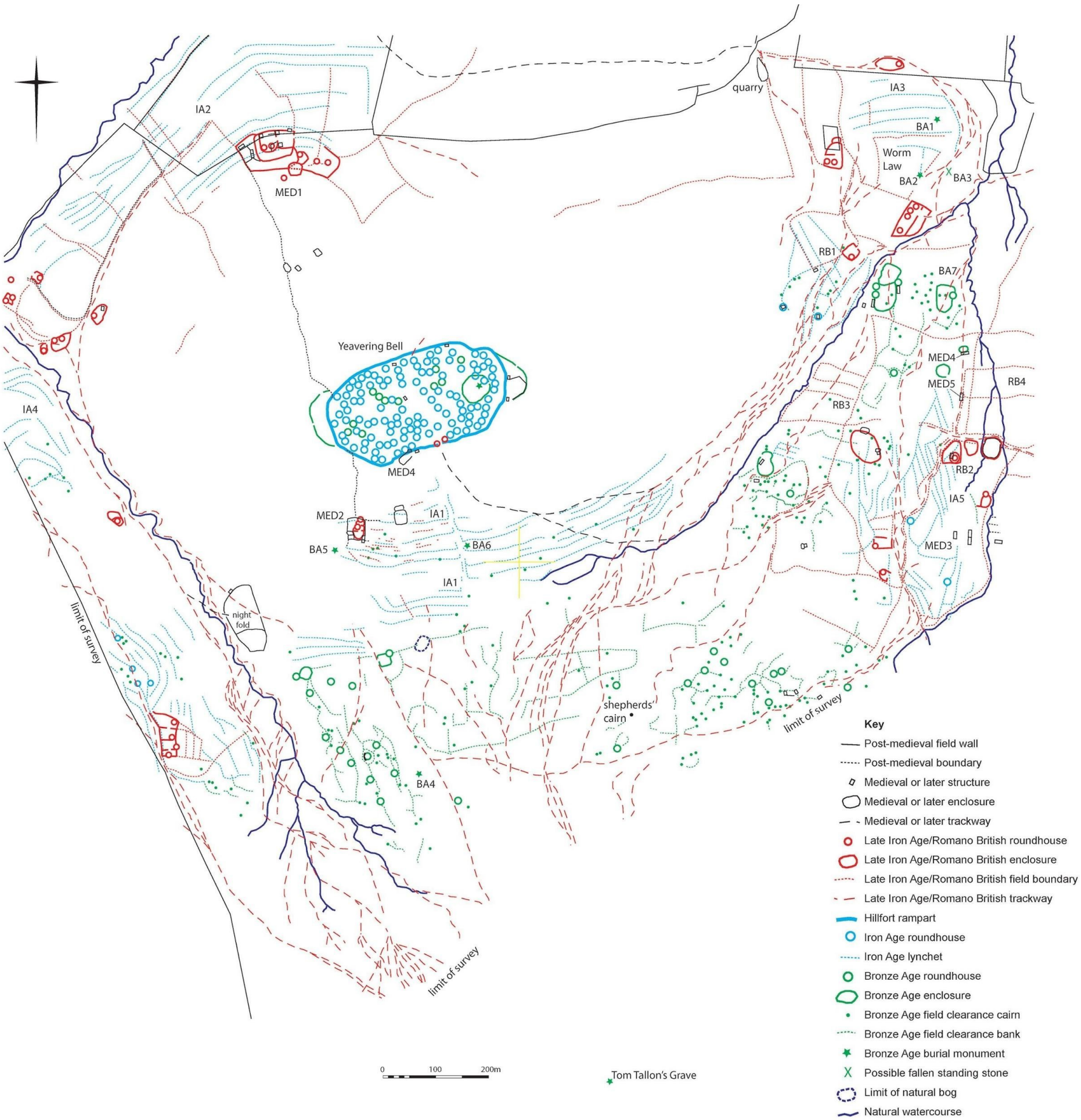


Fig. 6 Transcription of features identified using LiDAR, some of which have been subject to walk over survey (Ainsworth, Gates and Oswald 2016, fig. 1).

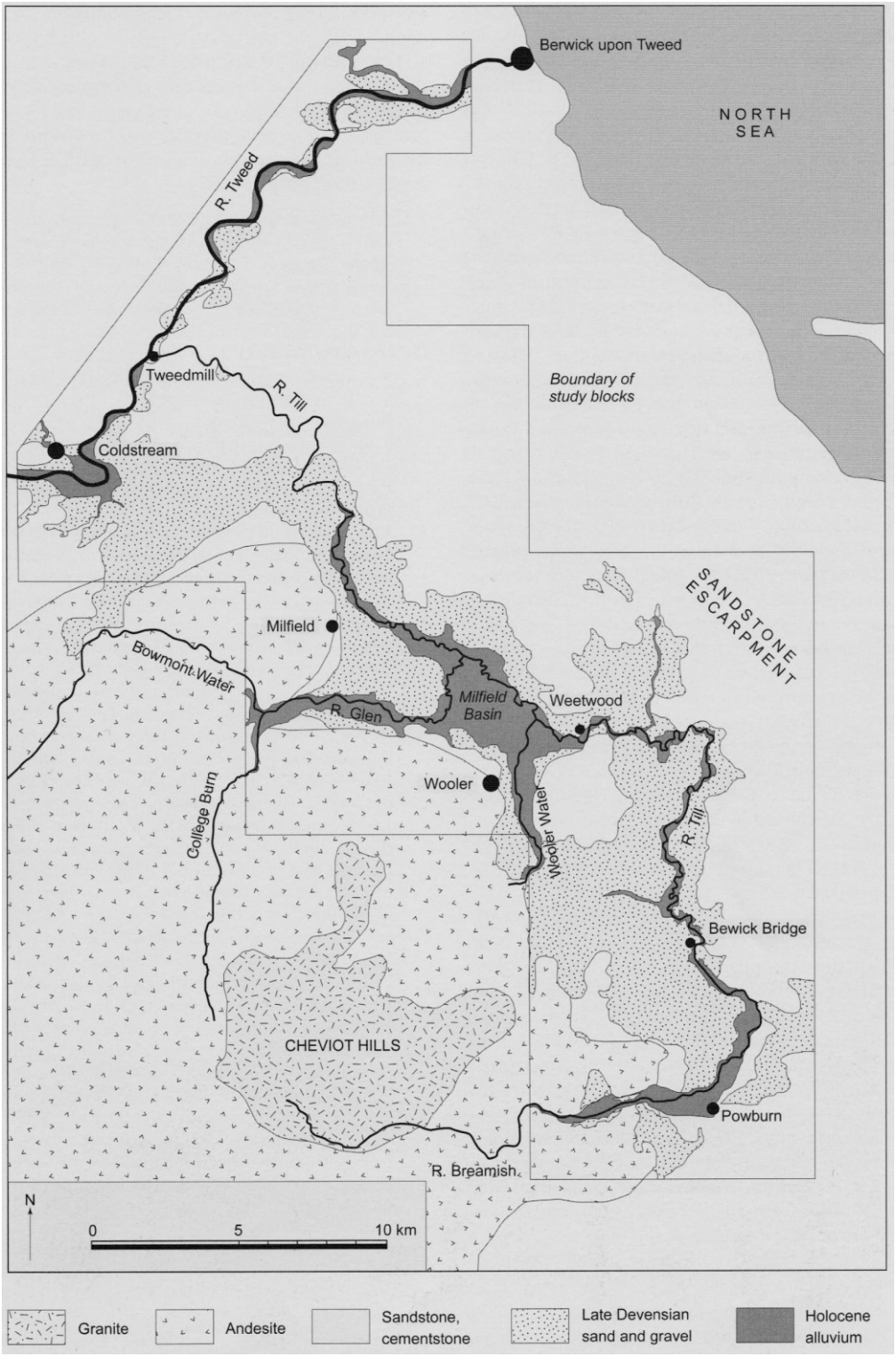
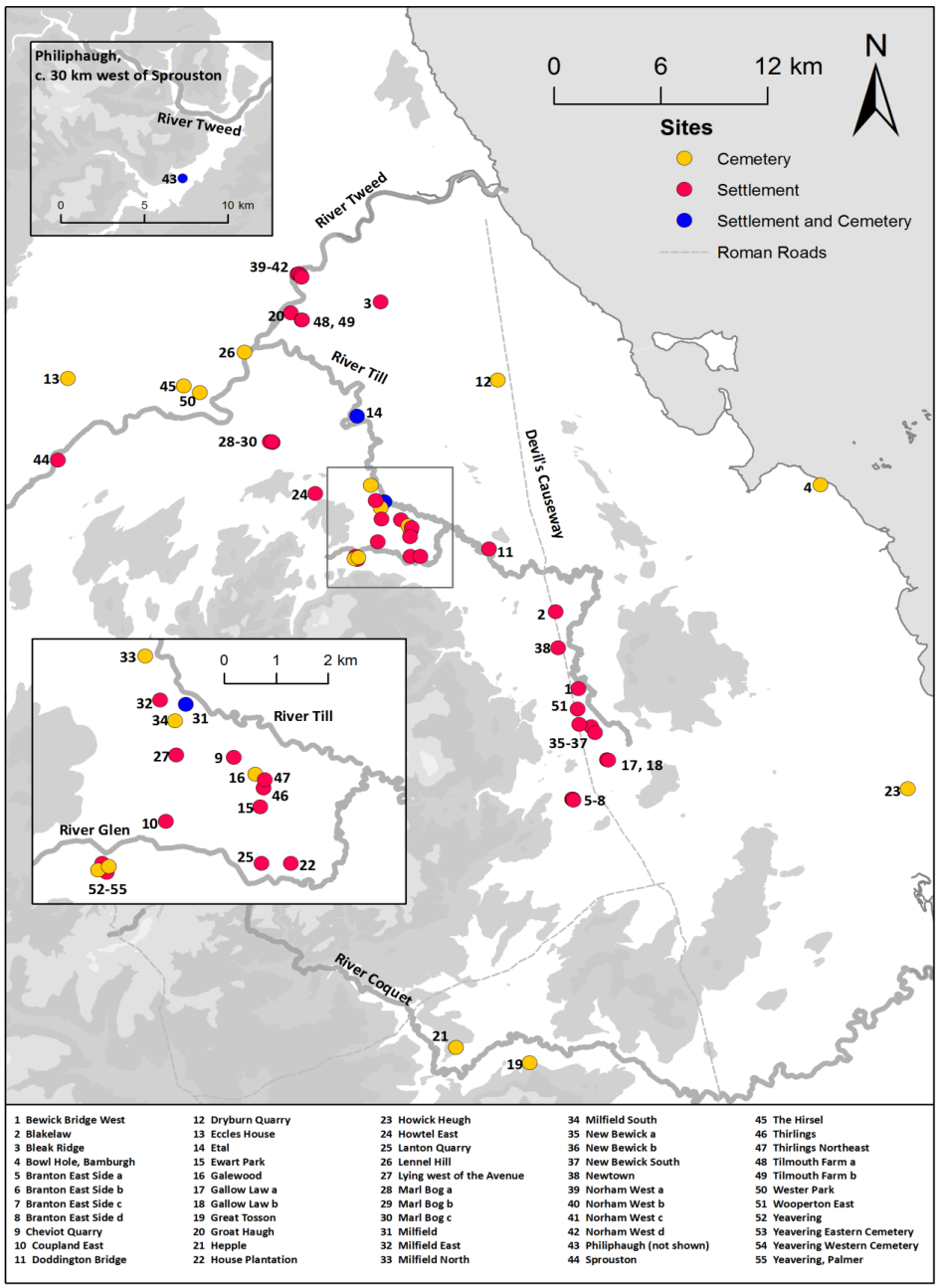


Fig. 7 Holocene deposits along the Rivers Glen, Till and Tweed (Passmore and Waddington 2009. fig. 2.5).

Fig. 8 Photographic images from the Brian Hope Taylor archive [Roll YD/29: Western Cemetery] YD_29_4 (top) and YD_29_2 (below).

Fig. 9 Distribution of all early medieval settlement and cemetery evidence recorded in the Milfield Basin. Settlement evidence is marked in red and includes those attested by excavation and air photography. Burial evidence, including find spots of metalwork that could indicate a cemetery, are marked in yellow (Semple et al. 2017, fig. 3). © Crown Copyright and Database Right (2017). Ordnance Survey (Digimap Licence).



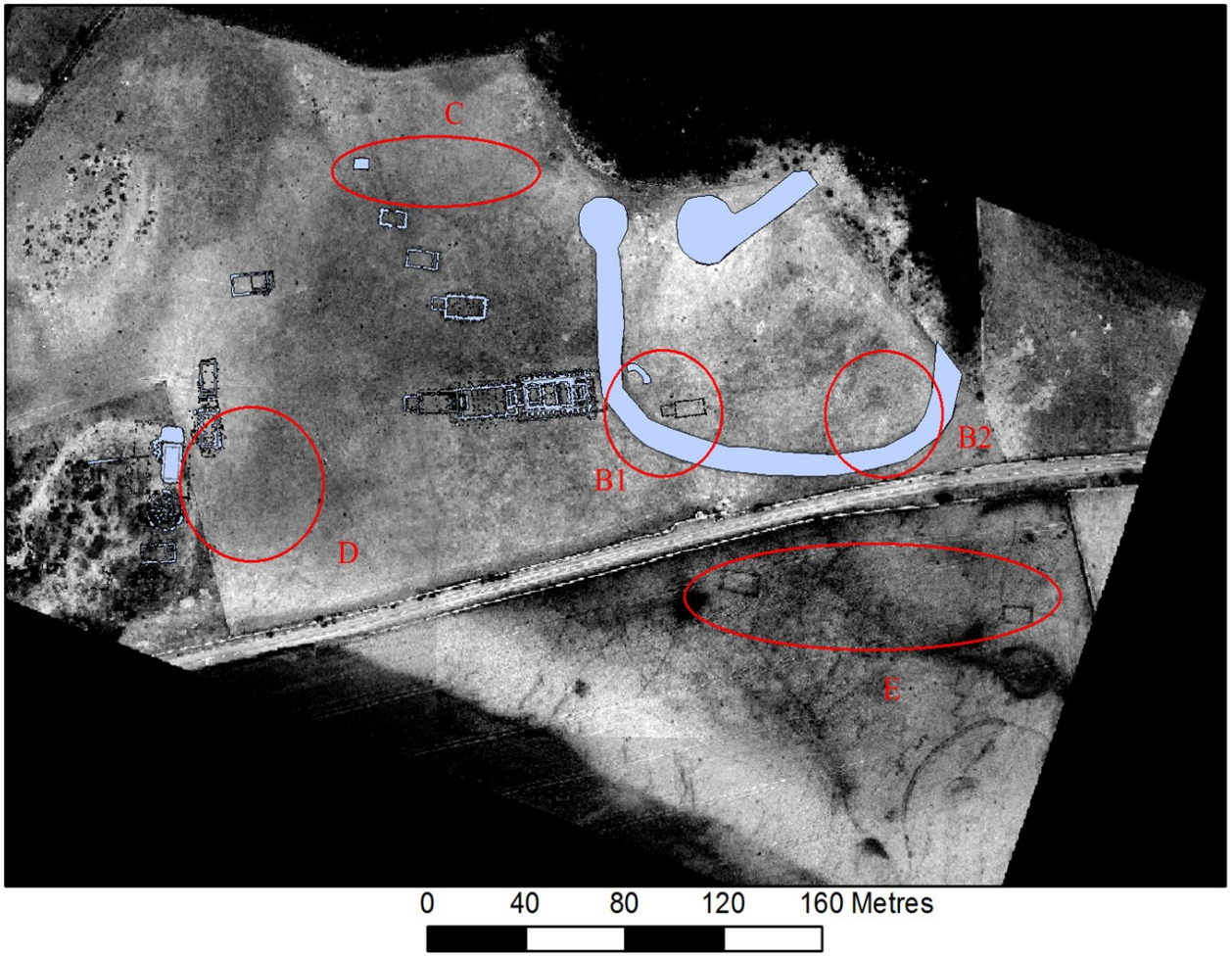


Fig. 10 Proposed areas for future on-site investigation/excavation.

Fig. 11 Photographic image from the Brian Hope Taylor archive. Area C. Building C1 under excavation. [Roll Y/56/83:Building C1. Scan-5581].

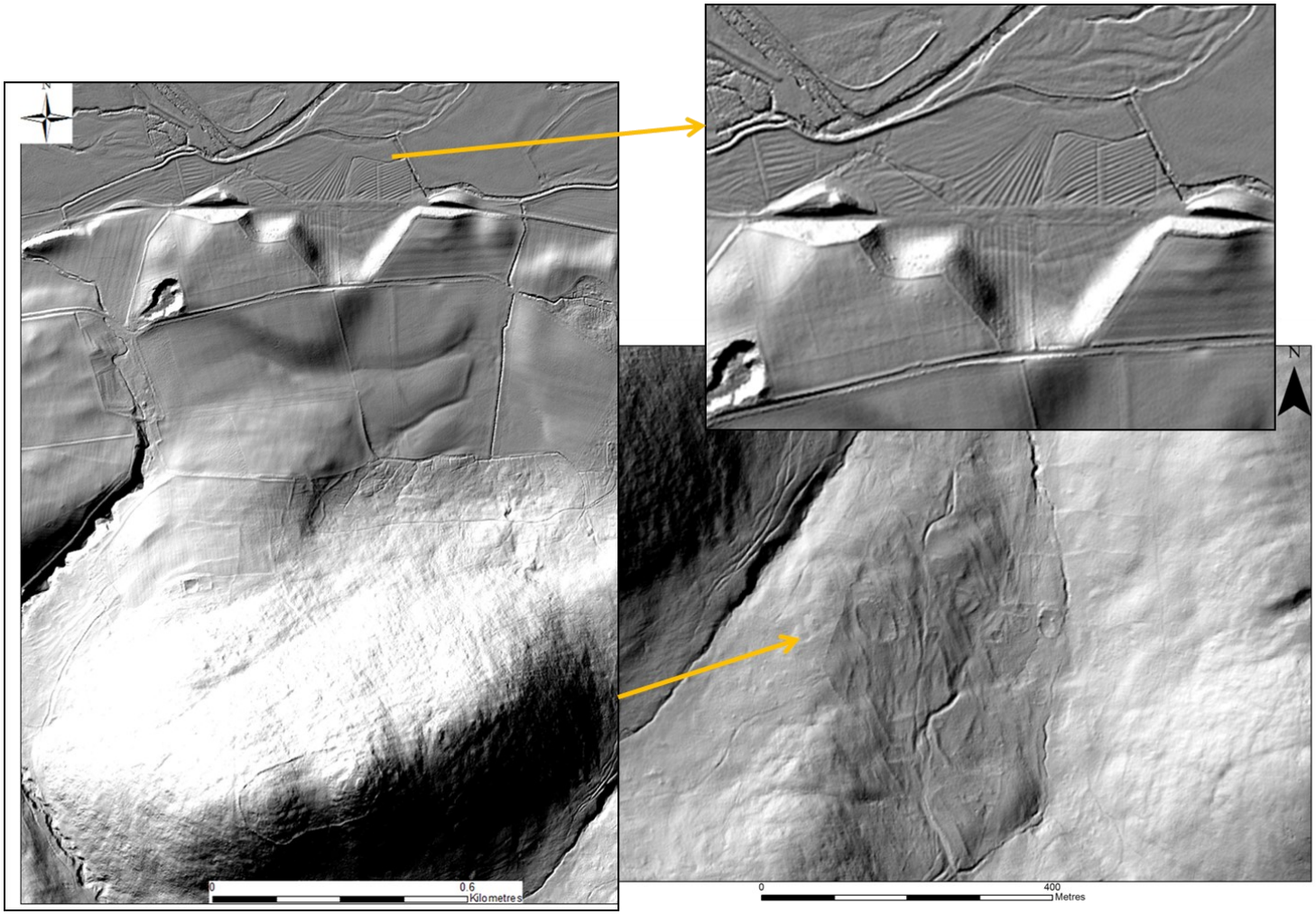


Fig. 12 Hillshade model based on shaded relief from a hypothetical light-source. Ridge and furrow or water meadows evident north of the gravel terrace, while a complex of multi-period features can be seen.

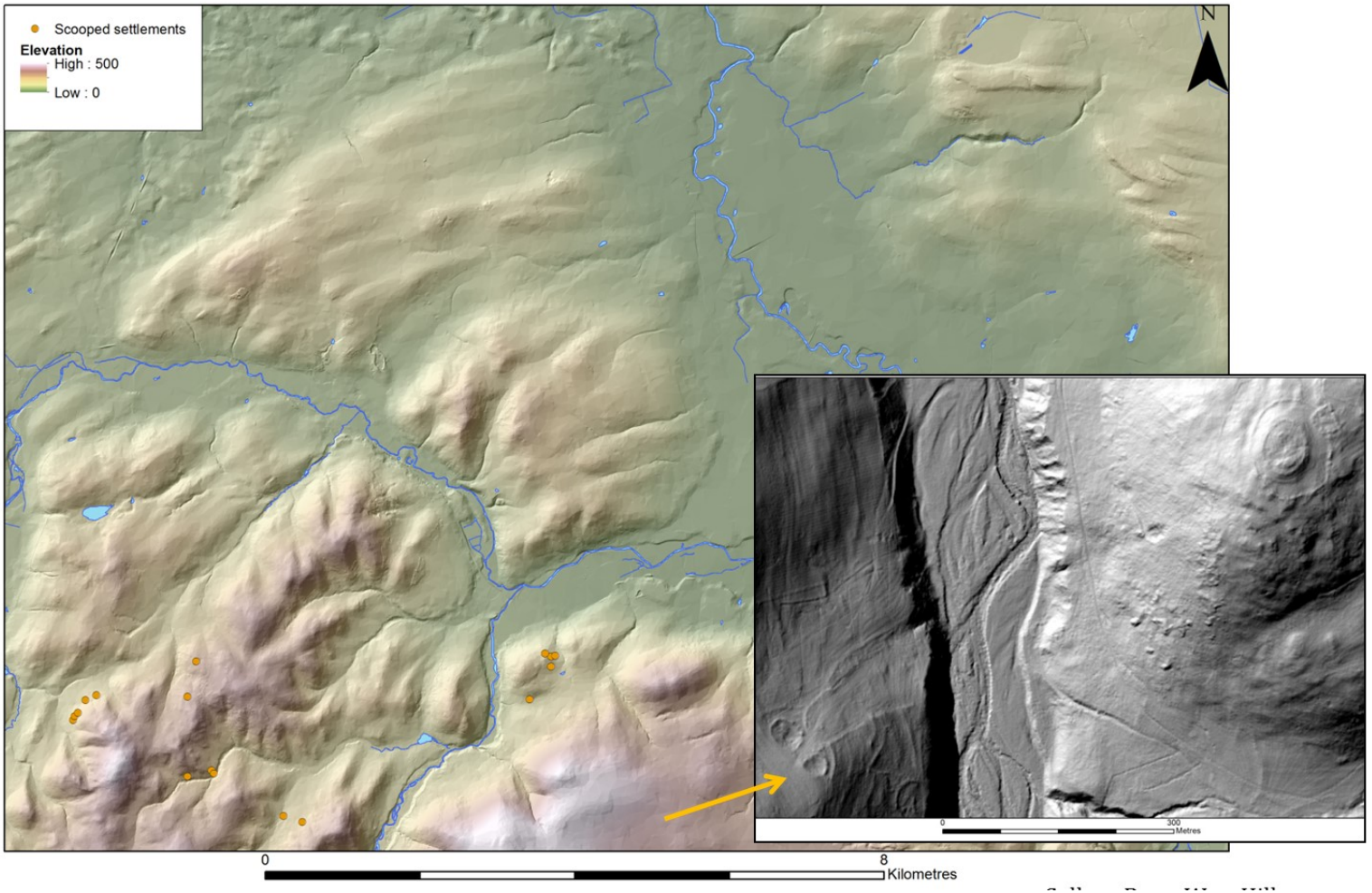


Fig. 13 College Burn and West Hill. Location and 1 m resolution LiDAR data showing the form of the 'scooped enclosure'.

Fig. 14 Distribution of all settlement and cemetery sites in relation to the river systems, historic flood levels, and showing ford and crossing points based on OS 1st Edition maps of the region. Note the locational proximity between many early medieval settlement sites and fording places. Map produced using data © Crown Copyright and Database Right (2017). Ordnance Survey (Digimap Licence).