Leawood Knoll

Investigation of a Hilltop Site in the Derwent Valley

James Brightman

heritage lottery fund
LOTTERY FUNDED

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Investigation of a Hilltop Site in the Derwent Valley

written by

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on behalf of

DerwentWISE Landscape Partnership

and

Dethick, Lea and Holloway Heritage Group

Published by Solstice Heritage, Crabtree Hall Business Centre,
Little Holtby, Northallerton, North Yorkshire, UK.

Typeset and design by Solstice Heritage.

ISBN 978-0-9933106-3-8

Front Cover: Looking west towards the Derwent Valley as volunteers record the remains in Trench 1 (© R. Walker).

Front Cover Artefact: Probable 18th-century trade token recovered from Trench 2 (© R. and A. Knisely-Marpole).

Back Cover: The view south across the smooth grassland of the knoll top showing the commanding position and long-range views from the site.

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ACKNOWLEDGEMENTS

The Leawood Knoll project was undertaken as a partnership between the Dethick, Lea and Holloway Heritage Group (DLHHG) (formerly the Dethick, Lea and Holloway Historical Society - DLHHS) and the Heritage Lottery-funded DerwentWISE Landscape Partnership Project, and was also part-funded through a grant from Derbyshire County Council.

No archaeological or historical work exists in a vacuum, and all projects owe a debt to the work that has gone before. The work at Leawood Knoll is, in some ways, the culmination of a programme of investigation into Lea Wood and its broader context which has been going on for many years. Already recognised as a site of interest, the work which started these investigations was that of Paul Smith and Richard Carr, both of whom visited the site during the most recent excavations. The 2013 Lea Wood Heritage Community Project was a multi-faceted archaeology and community history project funded by the Heritage Lottery Fund and delivered in partnership between Archaeological Research Service Ltd and the DLHHS. In the founding of the original project, the work and drive of James Hawksley must be acknowledged. Though he has since moved from the area and was unable to take part in this latest phase of investigation, his input to our study of the Wood is still greatly felt. The Leawood Knoll project is very much a natural continuation of this earlier work.

As with any project of this scale, it would not have happened without the dedication and drive of those leading on behalf of the main project partners. Special mention should be made of Helen Aldred and Caroline Johnstone of DLHHG, who were instrumental to the project.

From the DerwentWISE team, we would like to thank, firstly, Tania Pells, whose enthusiastic belief in the Leawood Knoll project contributed significantly to its success. Tania was also supported by an extensive team at Derbyshire Wildlife Trust (who host the DerwentWISE Landscape Partnership): Rachel Costigan, Angela Mayson, Nadine Stevenson and Dave Savage. Finally, I would like to recognise the support of Solstice Heritage colleagues Chris Scott, who picked up the slack while I was in the field, and Tiffany Snowden, who has contributed significantly to this volume in terms of illustration work and the assessment of the faunal remains.

A considerable vote of thanks must also go to the respective landowners for their permission to undertake the work: Mr T. Jurkiw, who owns the land of Leawood Knoll, and Mr P. Kay, who gave permission for us to cross his land to put the necessary logistics in place for the excavation. Both landowners were enthusiastic about the remains when visiting site, and their support is hugely appreciated.

Finally, but perhaps most importantly of all, the success of the project has been built on the support of the volunteers who gave their time, enthusiasm and expertise during the excavations; they are: H. Aldred, P. Burre, S. Dolton, M. Frobisher, D. Grace, E. Grace, R. Hibberd, K. Hoblyn, A. Johnstone, C. Johnstone, A. Knisely-Marpole, R. Knisely-Marpole, A. Pritchard, S. Quick, A. Noble, G. Smith, P. Smith, J. Stevenson, R. Walker and P. Ward.

Any omissions from this list are entirely the fault of the author, for which apologies are extended.

1. INTRODUCTION

Even in a landscape defined by steep valley sides and the dramatic limestone cliffs of Matlock Bath to the north, the twin hills of Lea and Bow Wood stand as prominent sentinels flanking the narrow valley of the Lea Brook. The woods themselves were once workshops, producing the raw fuel for the lead smelters in the valley below on a truly industrial scale. Later, they became the pleasure grounds of landed gentry, and it is this dappled solitude which still characterises them today. There is, however, a hidden past. The slighted banks and spread stone walls of earlier times can still be glimpsed among the leaf mould and twisted roots, fingerprints of pre-industrial peoples. This project set out to tell their story.

PROJECT BACKGROUND

The Leawood Knoll project was a community excavation overseen by a partnership of Dethick, Lea and Holloway Heritage Group (DLHHG), DerwentWISE (hosted by the Derbyshire Wildlife Trust) and Solstice Heritage. The project comprised the excavation of three trenches by volunteers to investigate a hilltop enclosure site at Leawood Knoll, Cromford, Derbyshire. The following background is a brief overview of previous work and the circumstances through which the project came about, derived from various material authored by the project partners.

In 2012, Dethick, Lea and Holloway Historical Society (DLHHS – the forerunner to DLHHG) were successful in obtaining a Heritage Lottery Fund grant to fund a programme of community-based research into the multi-period archaeological remains within Lea Wood. The wood is currently owned by Derbyshire Wildlife Trust (DWT) and is maintained as a nature reserve with public access. During 2013-14 a professionally led programme of landscape survey and excavation of seven small sites within the woodland was undertaken by DLHHS and Archaeological Research Services Ltd (ARS Ltd). Evidence was revealed of 14th-century charcoal burning, 17th- to 18th-century whitecoal production (wood fuel for local lead smelters), 18th-century agriculture and 19th-century development of the wood for pleasure (the wood was part of the large Derbyshire estate owned for 250 years by the Nightingale family).

The 2013-14 investigation covered the part of the wood owned by DWT, but it was also noted that there are earthwork and stone features of interest in an adjoining high part of the wood called Leawood Knoll. This area is in private ownership – part of land known as Nightingale Park in which deer and sheep are kept – and so was not included in the earlier project. Leawood Knoll sits at the highest part of the wood and has been of considerable interest for many years given the presence of an enclosure bank seemingly enclosing the hilltop. It's topographic setting and the nature of the accented scarp-edge raised the possibility that the knoll was the site of a previously uninvestigated late prehistoric hilltop enclosure overlooking the Derwent Valley.

Permission was given in 2014 by the landowner to access the area. A landscape survey was carried out and a gradiometer survey undertaken by ARS Ltd in December-January 2014-15. The walkover survey confirmed that the outer enclosure

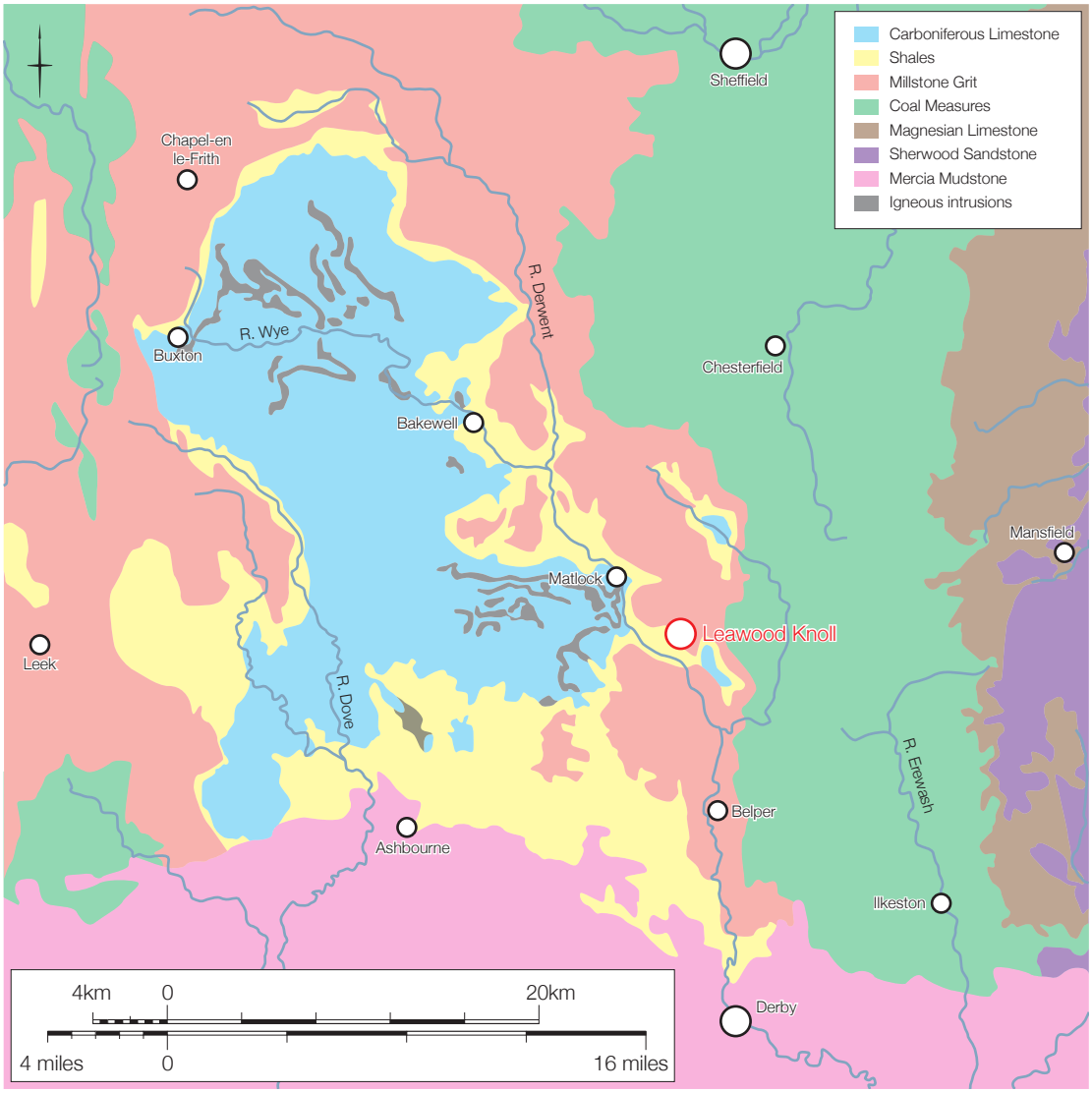

Figure 1 Geological overview of the Derbyshire uplands

did indeed survive as a low earthwork bank, which was most pronounced along the south-western side of the Knoll where it followed an apparently natural scarp. The geophysical survey of the central area of the enclosure revealed some linear features and a possible circular arrangement of potential pits or similar features of unknown date. By 2017, with the support of DerwentWISE and Derbyshire County Council, everything was in place to mount an excavation and attempt to discover the origins of this enigmatic hilltop site.

GEOLOGY

The Derbyshire uplands are given their distinct forms and landscapes by the complex and varied underlying geology, perhaps the most diverse within a single region of any part of Britain. The central portion of the Peak District comprises the 'White Peak', a fertile upland landscape characterised by an underlying Carboniferous Limestone 'dome'. The limestone was laid down in shallow tropical seas some 350 million years ago, and the fossilised remains of the sea creatures can still be seen in the rock; the most

Figure 2 Looking west across Trench 1 and the Derwent Valley while volunteers measure and record the excavated features © R. Walker

distinctive crinoidal forms are sometimes known as 'Derbyshire Screws' given their ubiquity in the area. The free-draining and base-rich soils deriving from the limestone have provided the background to millennia of activity and settlement in the White Peak, and the rich mineral rakes and levels have given rise to centuries of exploitation and extraction.

Beyond the White Peak, as the exposed bedrock gets younger, the low-lying river valleys are dominated by softer shales. Crossing these valleys and rising up once more, we reach the horseshoe of Millstone Grit known as the 'Dark Peak'. Perhaps the most photographed geological formations within the Derbyshire Uplands are the Edges that look back across the shale-dominated valleys to the central limestone plateau of the White Peak: Curbar, Froggatt, Gardoms, Stanage and others. The Millstone Grit itself is the name given to a series of interbedded sandstones, mudstones and siltstones. Hard-wearing and easier to work and dress than limestone, the name derives from its extensive use for the manufacture of millstones from the medieval period onwards. The hill of Lea Wood itself comprises an upstanding block of Ashover Grit – part of the Millstone Grit series – rising above the shales of the Derwent Valley.

SITE LOCATION AND FORM

Leawood Knoll is a relatively flat saddle of land above the hill covered by Lea Wood, sitting south-east of the highest point of the knoll proper and with a shallower slope to the north-east leading towards the large house of Lea Hurst and the villages of Lea Bridge and Holloway beyond. Its principal aspect, as with its twin hill of Bow Wood to the north-west, faces south-west across the Derwent Valley towards Wirksworth and Cromford Moors.

The enclosure which defines the knoll comprises two distinct types of earthwork: along the long sides of the saddle, a seemingly natural scarp has been accentuated into a lynchet or bank with built stone facing visible through the turf in places. The prominence of the lynchetted edge is greatest on the south-west side of the enclosure, whilst the north-east

Figure 3 Location of Leawood Knoll

Figure 4 Looking south-east along the line of the accentuated scarp or lynchet earthwork as de-turfing starts in Trench 3. © R. Walker

Figure 5 Looking north-east along the best-preserved section of the south-east cross-bank, with traces of an orthostat wall

edge is much slighter though still visible as it passes through a small plantation of veteran trees. The constructional form of the south-west earthwork was investigated during the project and is detailed below in the description of Trench 3.

In comparison to the well-defined accentuated edge on the long sides of the knoll, the north-west and south-east boundaries of the enclosure are truncated and slight cross-banks standing no more than 0.5 m high, and much lower than that for most of their length. The best surviving length of cross-bank is at the southern corner of the enclosure, where the lynchetted edge of the south-west side turns around a natural slope and meets the cross-bank, which at this point carries the footings of a rough orthostat wall. The north-west cross-bank is visible in the western corner

for a short length before it disappears beneath the line of a more recent drystone wall marking the boundary between the pasture grassland of the knoll and the neighbouring Lea Wood.

The highest point of the knoll lies north-west of the enclosed saddle of land, within the highest parts of Lea Wood. Beyond the drystone wall surmounting the north-west cross-bank, a series of truncated and slight earthwork lynchets and robbed-out wall bases partially define the summit of the knoll. Unfortunately, the earthworks and walls which may be contemporary with the features investigated to the south-east are intercut with small areas of quarrying and wall bases or features more likely to date to the time when the Nightingale family transformed the wood into pleasure grounds in the 19th century. The truncated wall bases extending north-west from the enclosure are partially mirrored outside the south-east cross-bank. Here, a series of large stone boulders have been brought together, presumably at least partially in order to clear the enclosed land. Some of these larger boulders appear to have been placed or set to create rough orthostat walling, though no clear structural form could be discerned. Any future opportunities to investigate these enigmatic rough structures may potentially yield some important contextual information as to the uses of the knoll over time.

2. METHOD

The excavation was undertaken over the course of two weeks in April and May 2017. Conditions were generally very good, and the excavation focused on three separate trenches:

- Trench 1 was located to test a group of geophysical anomalies identified during the earlier survey work (ARS Ltd 2015).
- Trench 2 was a smaller trench examining the slight earthwork remains of the south-east cross-bank.
- Trench 3 examined part of the best-preserved scarp-edge earthwork along the long south-west edge of the knoll top.

All de-turfing and excavation of the overburden was undertaken by hand, with all turfs removed and stacked to prevent degradation prior to reinstatement at the end of the excavation. All excavation was undertaken with hand tools suitable to the nature of the deposit in question and in accordance with standard stratigraphic principles to allow use of single context planning and recording.

All individual features were cleaned, delimited and excavated by hand prior to recording. Written recording was based on *pro forma* sheets creating a primary written record and was accompanied by a site diary giving a summary of each day's work including overall interpretive observations. The drawn record comprised plan and section/profile/elevation illustrations of all features at a suitable scale depending on the complexity and significance of the remains. The drawn and written records were accompanied and augmented by a full photographic record compiled in high-resolution digital format. Survey control was established with a site datum correct to OSGB National Grid and Ordnance Datum, located using a survey-grade GPS with an accuracy of ±10 mm. A control network from the site datum was established with a total station, from which all trenches and features were located and tied to the National Grid.

After fieldwork, all finds were processed and catalogued in line with standard guidance (i.e. Watkinson and Neal 1998; CIfA 2014a; 2014b), prior to submission to a relevant specialist for assessment; the results of these assessments have been presented below. The small finds, along with all primary field records and digital versions of all relevant images, have been compiled into a site archive for deposition with Derby Museum and Art Gallery.

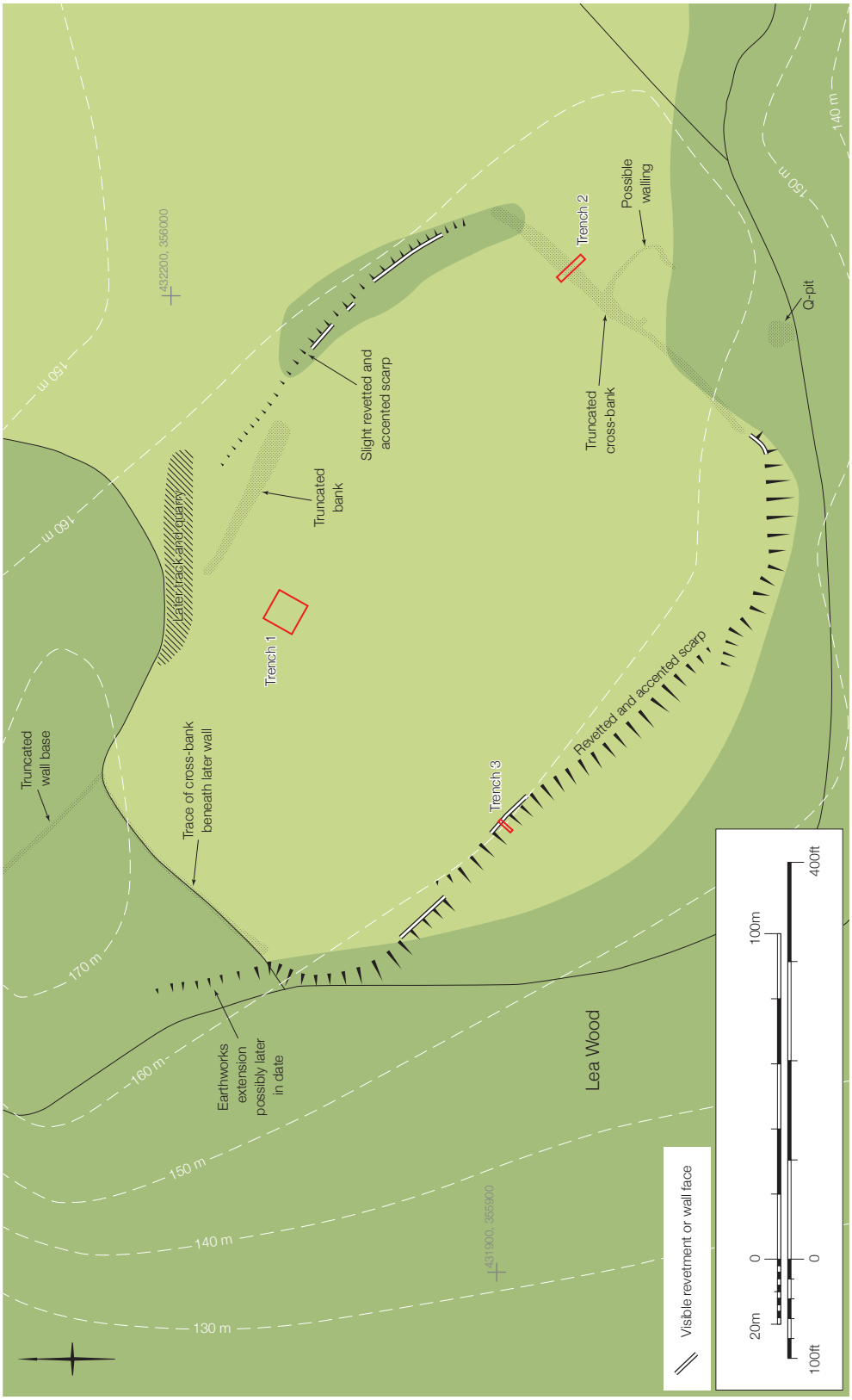

Figure 6 Plan of Leawood Knoll showing the main earthwork features and trench locations

3. Excavation Results

TRENCH 1

Trench 1 was located in the centre-north interior of the enclosed area; it measured 10 m^2 in plan, though two 2 m strips down each side were left unexcavated following initial de-turfing. It was targeted to investigate a large circular arrangement of high magnetic response features identified on the geophysical survey (ARS Ltd 2015).

The uppermost deposit was the developed topsoil common across the whole site (001). It was a mid-brown sandy loam of *c.* 0.2 m in thickness overlying a clayey-sand subsoil containing patches of orange-brown sand. The artefactual evidence recovered from the topsoil and subsoil amply illustrated the long-term agricultural history of the site, with the difference between the two deposits in composition perhaps illustrating different periods of ploughing on the site. During excavations, the presence of a considerable amount of well-distributed flecks of burnt limestone recovered from within the overburden represents the 'sweetening' of the soil on the naturally acidic sandstone bedrock.

The presence of a varied assemblage of small finds within the overburden can also be seen as part of the drive to improve the soil, most likely representing the process of 'nightsoiling': the incorporating of midden material during ploughing to improve its fertility. The small finds from within the topsoil (001) were assessed together across all three trenches and included: prehistoric lithics dating to the Mesolithic, Neolithic and potentially Early Bronze Age; ceramic sherds indicating activity from the medieval period through to the 20th century; a small collection of clay pipe pieces most likely dating to the 17th and 18th centuries; scattered finds of broken glass and metal nails of indeterminate date; and a single piece of lead-smelting slag. A full description and assessment of the small finds is included below.

The interface between the subsoil and clay substrate beneath was indeterminate across much of the trench, and

Figure 7 Volunteers trowelling through the topsoil and overburden in Trench 1

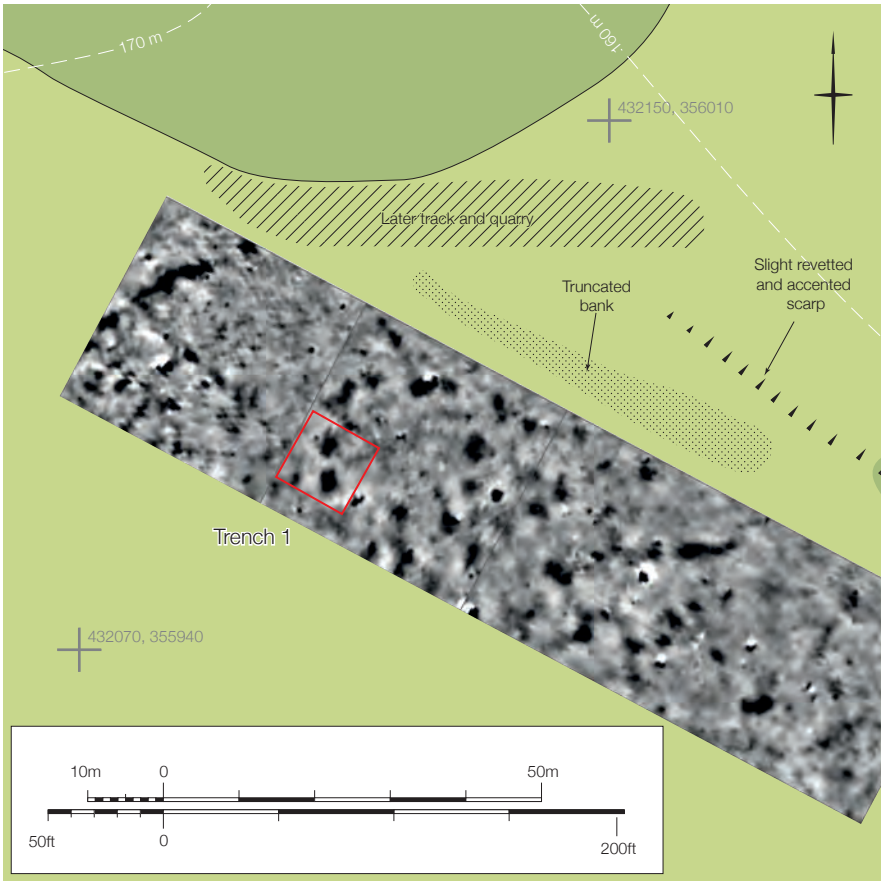

Figure 8 Location of Trench 1 in relation to the anomalies identified in the earlier geophysical survey. The magnetometry data is © ARS Ltd and has been supplied by DLHHG

the conditions during the excavations were such that all the deposits dried out very rapidly, further blurring distinctions between deposits. Nevertheless, four separate features were identified cut into the substrate, though all were irregular in plan form and have almost certainly been truncated by later ploughing. Allowing for minor error in trench siting in relation to the magnetometer survey, three of the features equate well with the location of high-response anomalies identified during this earlier geophysical survey work. In addition, there is a possible linear trend visible within the geophysical survey results which aligns with the centre of the trench and the linear cut feature described below.

Features F004, F011 and F021 were irregular and shallow features filled with a combination of packed and broken stone in a clayey sand matrix very similar to the subsoil deposit above and the substrate into which they have been cut. The features are almost certainly tree throws, remnants of when the knoll top was more wooded. Running through the centre of the trench was an irregular and poorly defined linear cut feature almost identical in character of fill to the discrete tree throws to either side; this has been tentatively identified as a hedgeline or possibly a cluster of closely spaced shrubs or trees.

Given the presence of considerable amounts of stone within the fills of the features, and the lack of any clear lamina or tip-lines, it is considered more likely that the features were actively backfilled. If this was taking place at a time when the knoll top was being prepared for agricultural use, then the clearance of stone from the area and its use to pack in the hollows formed from tree removal would seem a logical form of 'killing two birds with one stone'. Unfortunately, no artefacts were

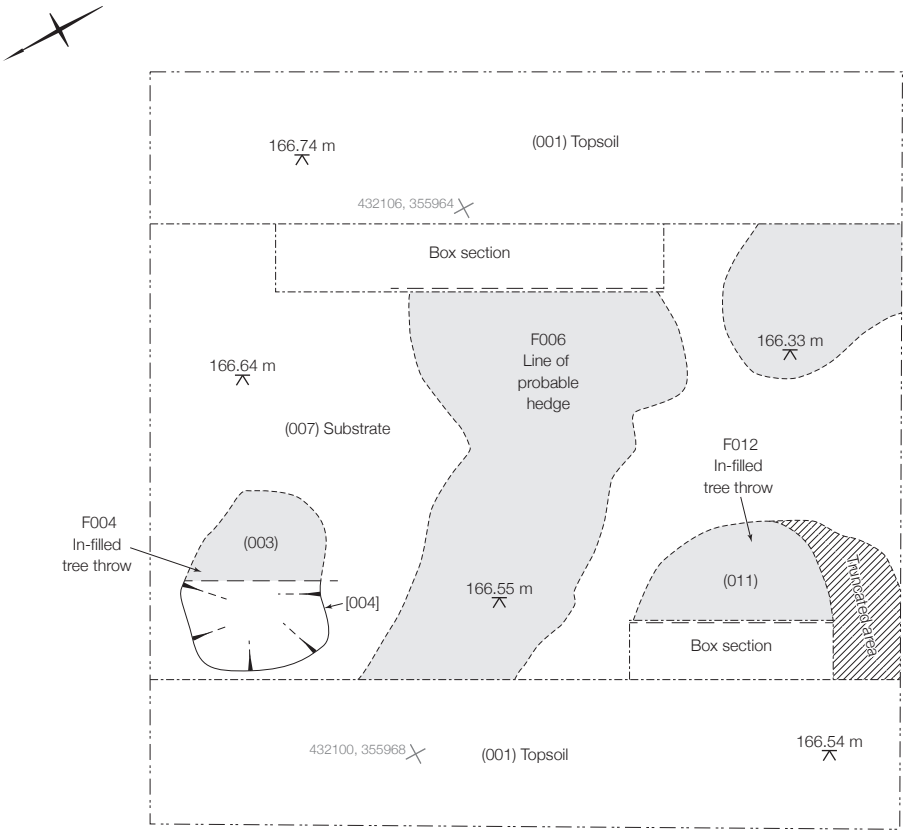

Figure 9 Plan of features in Trench 1

found in the fills of any of the cut features. Despite this, some fragments of stone were not completely packed in and still stood slightly proud, extending through the subsoil and, in places, even into the base of the topsoil. One large stone in particular was noted, as it was crossed with plough scars in two different directions – along the long axis of the knoll and across it – equating to the two most prominent directions of surviving ridge and furrow visible on the lidar data.

TRENCH 2

Trench 2 was opened to examine the surviving form of the south-east cross-bank delimiting this edge of the enclosed part of the knoll and measured 10 m x 2 m in plan. The developed topsoil (001) was the same as that encountered in Trench 1, and the uniformity of this deposit, along with the heavily truncated nature of the cross-bank, suggests that the later agriculture on the site did not respect this earlier south-east boundary. Beneath the topsoil there was a silty clayey sand subsoil (008), similar though not identical to

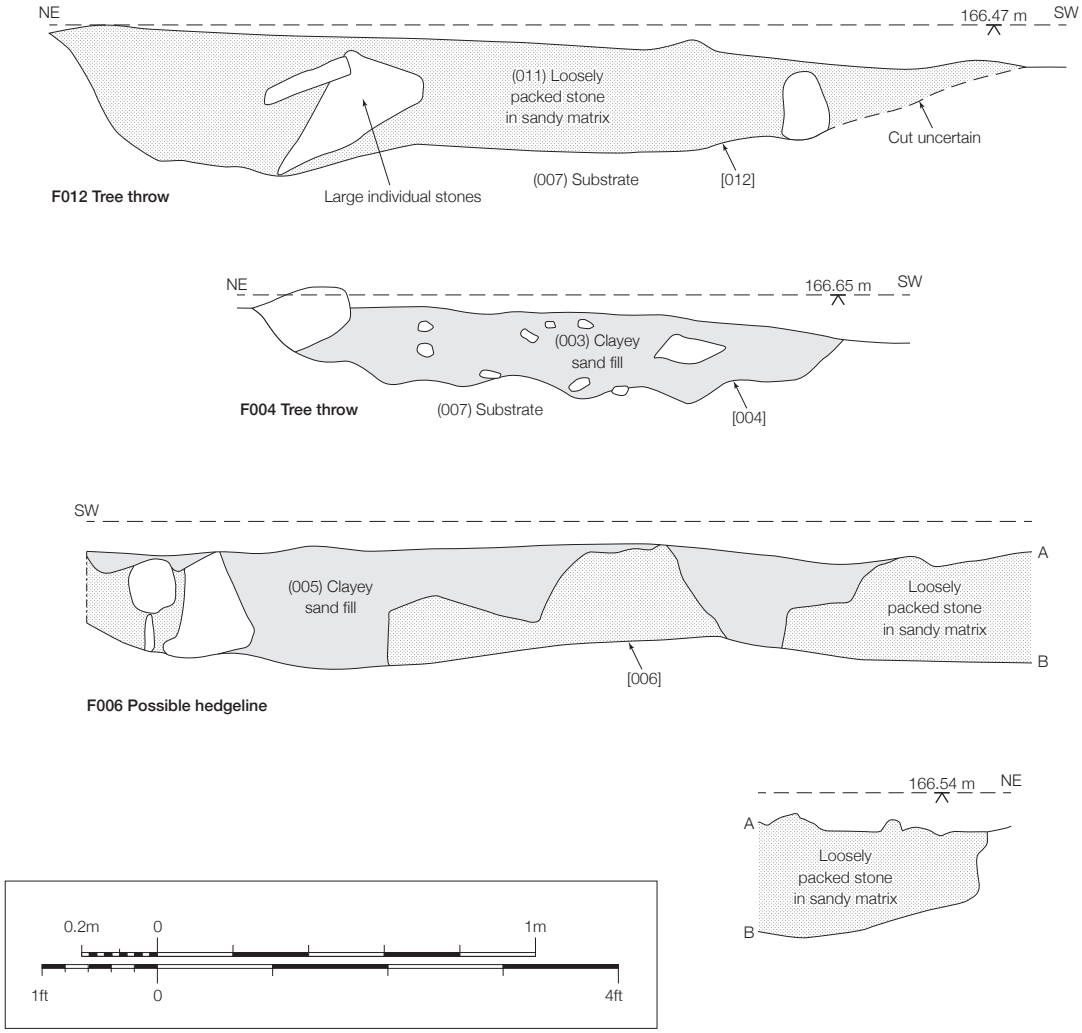

Figure 10 Sections through features in Trench 1

that observed in Trench 1 and containing noticeable pockets of ferruginous clay. The subsoil was thicker to the south-west side of the trench – at its thickest in the south corner – and graded out to the north of the trench. In the north-east trench section (shown in Figure 12 below), the subsoil deposit was only visible at the very south-east end.

The general signature of small finds recovered from Trench 2 was similar to that in Trench 1, confirming the mixed agricultural nature of the overburden across the site. In addition, the subsoil (008), contained two fragments of glass, one from a mouth-blown bottle base, a late 19th- or early 20th-century shotgun cartridge head, and most notably a single heavily eroded copper trade token most likely dating to the 18th century. A full description and assessment of all the small finds can be found below.

The cross-bank itself had been almost entirely removed through later truncation. The surviving extent of bank material (010) comprised a compacted spread of small stones in a clayey sand matrix c. 1.35 m in width. Overlying this to both sides, a thin deposit of mixed small and medium stones (009) represents the spread

Figure 11 The surviving extent of the heavily truncated cross-bank in Trench 2, now only existing as a spread of small stones

bank material. If the observed remains represents all the remaining bank material, then the boundary would have been very slight. It has to be considered, however, that the original bank may have stood higher, with the majority of the upper stone and earth material removed prior to being overploughed. No small finds were recovered from the truncated remains of the bank.

TRENCH 3

Trench 3 was a small section measuring 1 m x 4.5 m in plan excavated over one of the most intact parts of the south-west earthwork boundary. At this point, the boundary of the knoll enclosure comprises a modified scarp edge with areas of built facing stone visible through the turf in places at the top of the earthwork. It became clear through the excavation that the visible boundary as it currently exists was the result of more than one phase of construction.

The earliest deposit was the sandstone bedrock (019) encountered as a step running along the line of the contour. In front of this stone step, a pocket of surviving clay substrate (007) indicates that, at least at this location in the enclosure boundary, there was probably an existing natural edge which was then augmented. Above and below the step, the lack of substrate suggests that the land was prepared by removing all overburden down to bedrock, and possibly by quarrying away sections of bedrock to create the desired form.

Capping the step, the principal form of the earthwork comprised a deposit of tightly packed stone cobbles set in clayey sand (018) and forming a stone-revetted lynchet. The deposit was slightly thicker at the lip of the step (*c.* 0.6 m), creating a stable edge along what is the downslope side of the overall enclosure. Directly over the stone lynchet, a fine sandy loam soil (015) had accumulated with a homogenous colour and composition. The thickness of the soil was *c.* 0.4 m, and its composition, deep red-brown colour and greater organic content, gives a suggestion as to the original quality and character of the ploughsoil across the rest of the knoll. Two ceramic finds were recovered from this developed

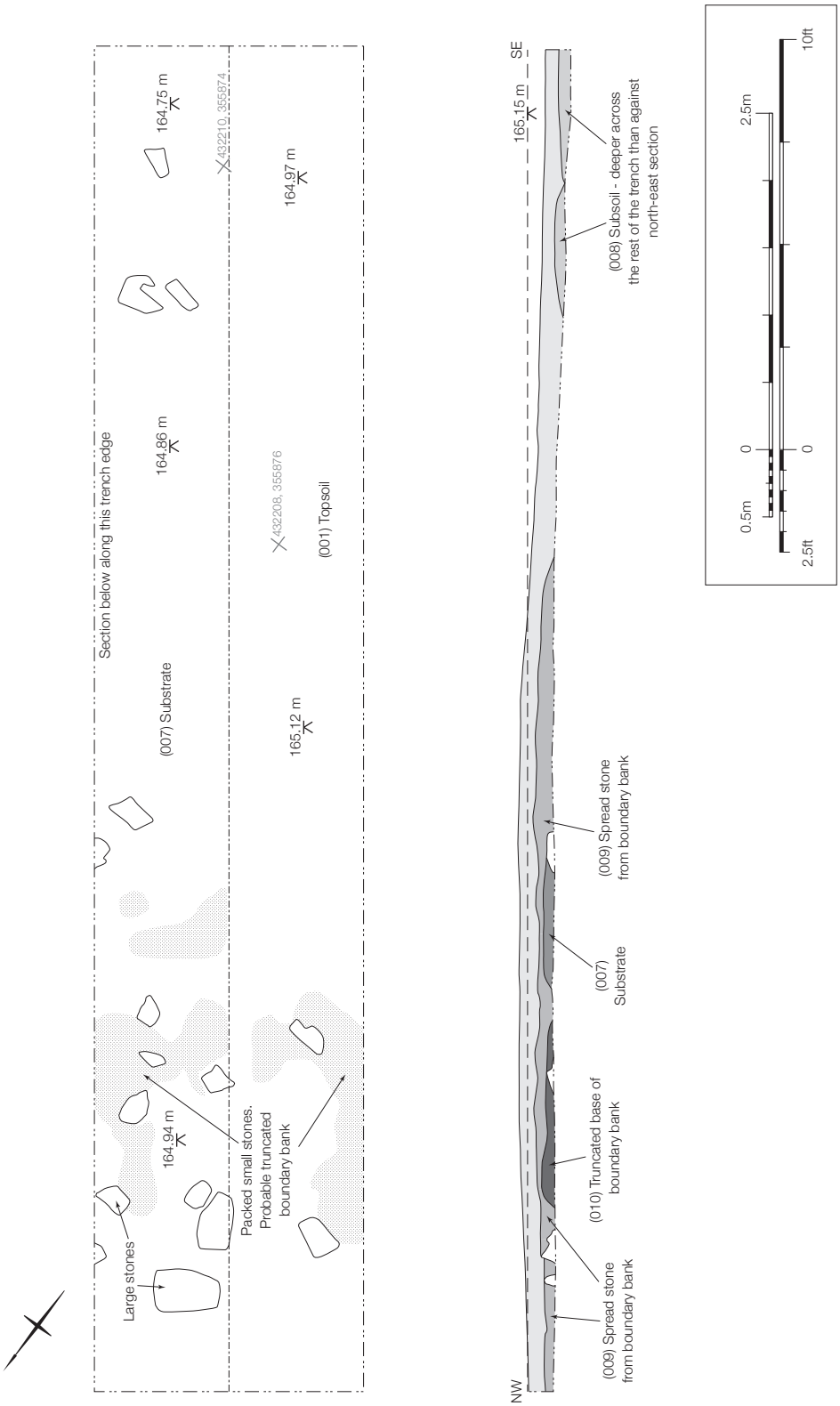

Figure 12 Plan and section of Trench 2

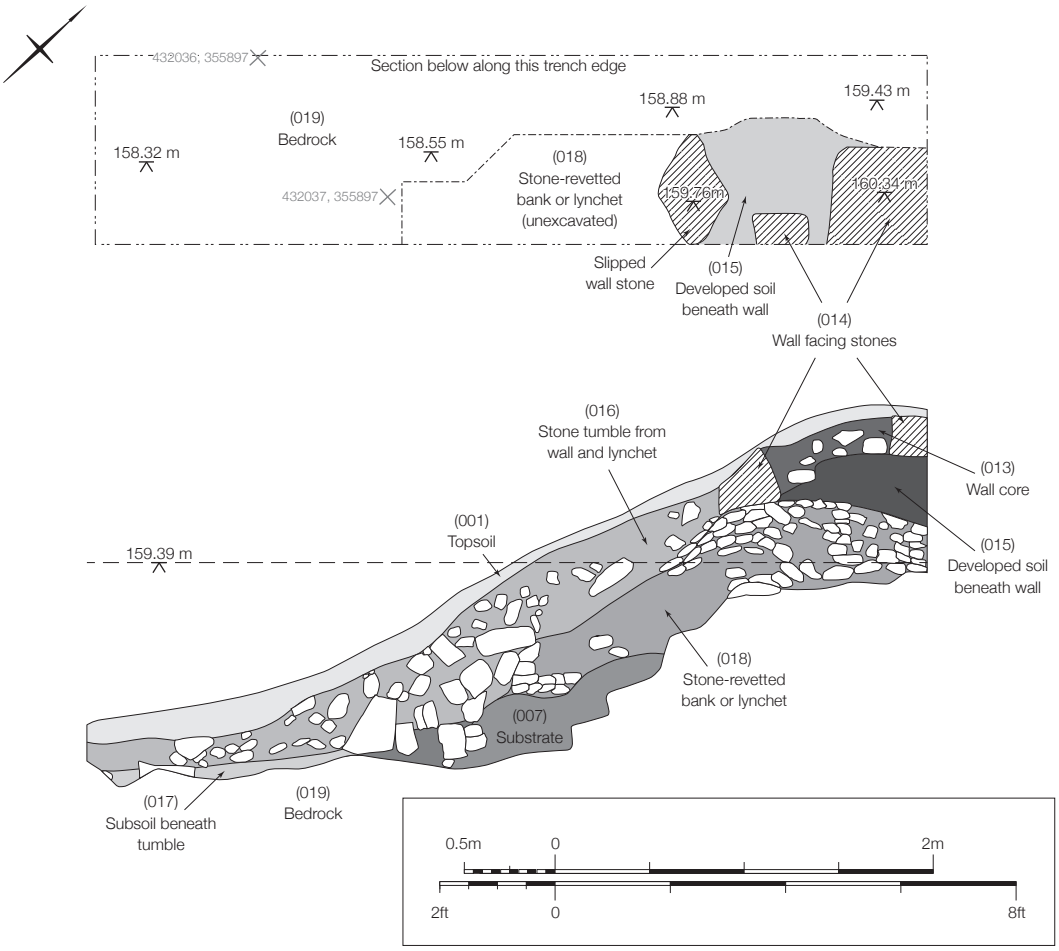

Figure 13 Plan and section of Trench 3

soil: a sherd of 12th- or 13th-century White Sandy ware and a sherd of Late Blackware dating to the 18th century. This spread of dates equates well with the mix of artefactual evidence from the overburden across the rest of the knoll.

The facing stone visible through the turf was shown to be the single surviving basal course of a well-built drystone wall sitting on the lip of the earthwork and overlying the ploughsoil beneath. The small finds within the soil provide both a terminus ante quem of the medieval period for the original construction of the revetted lynchet and a terminus post quem for the construction of the drystone wall of the 18th century. The wall itself comprised two skins of well-set facing stones (014) with a packed rubble core (013), with the overall construction *c.* 1.3 m in width, though the downslope facing stones had slipped. The drystone wall will have presented a considerable barrier enclosing the knoll top around the lip of the earlier lynchet. After it fell out of use, the wall then slipped or fell down the slope creating a relatively loose deposit of tumbled stones (016). Three sherds of pottery with a total date range spanning from the 12th to the 17th century were recovered from the tumble, but given the secure piece of 18th-century Blackware from beneath the wall, these pieces must be considered residual in this context. Finally, a thin turf and soil layer (001) accumulated over the stabilised stone tumble.

Figure 14 Facing north across Trench 3 after excavation. The bedrock is exposed at the base of the trench. The stone packing of the lynchet can be seen from the mid-point of the trench, and the developed topsoil is visible in the narrow north-east section at the back of the trench

Figure 15 Looking north-west along the line of the downslope earthwork boundary. The stone tumble can be seen at the top of the facing section, and the surviving basal course of drystone wall can be seen on the lip of the earthwork

4. The Lithics

Spencer D. Carter

METHODOLOGY AND CHRONOLOGICAL PARAMETERS

Lithics (chipped stone) were provided washed and packaged in individual ziplock bags as individual small finds by specific context. Each lithic was examined on a clean working surface in natural light, then more closely by naked eye, and finally using a x10 and x20 magnification hand lens. The abraded nature of the majority of lithics precluded the use of microscopic examination (x100 and x200 capability) although a small proportion of the modified lithics displayed possible use-wear edge-damage which was noted. Metrical data (length, breadth and thickness) were captured for complete, knapped artefacts and debitage using digital callipers with plastic tines, accurate to one-hundredth of a millimetre although only recorded to a tenth.

Each lithic was logged into the spreadsheet as it was examined and allocated a unique catalogue number. The archive spreadsheet captures a suite of metrical and lithic attribute data together with tentative interpretations of function and, where diagnostic characteristics are present, approximate period. The following is a summary of definitions (see Appendix 1 for a full descriptive breakdown of all lithics assessed).

Table 1 Lithic analysis definitions summary

Raw Material	
Material	Lithic taxonomy: FLINT, CHERT, CHALCEDONY, QUARTZITE, IGNEOUS, METAMORPHIC, others as appropriate.
Material Type	Lithic raw material type based on macroscopic geological attributes
Material Colour	Munsell (2000) soil colour charts that describe hue, value and chroma and adopted here to describe groundmass and inclusions.
Material Lustre	Dull, Medium, Shiny.
Material Texture	Fine, Medium, Coarse, Cherty.
Material Opacity	Transparent, Translucent, Semi-Translucent, Opaque when held to natural light.
Cortex	Proportion of retained cortex as %, cortex colour and type (Andrefsky Jr 2005).
Patination	Proportion and degree of patination as %, patina colour.
Technology	
Category	Debitage, Tool, Utilised (Non-formal Tool).
Primary Type	Morphology of the blank.
Secondary Type	Morphology of a modified artefact (e.g. tool typology) or debitage.
Regular/Irregular	Displays or does not display a straight edge >10mm.

Lithic analysis definitions summary (continued)

Technology (continued)	
Reduction Sequence	Primary (fully corticated dorsal), Secondary (partially corticated), Tertiary (no cortex), cf Andrefsky Jr (2005).
Platform	Where present, describes the platform: Cortical; Complex (Abraded); Facetted (core/tablet); Flat; Keeled (ridge).
Bulb	Recorded as Diffuse or Pronounced where present.
Fracture Type	Describes the termination as: Corticated; Feather; Follow-on; Hinged; Irregular (shatter); Opposed platform; Overshot (plunging); Step.
Dorsal Scars	Count of visible blade/let and/or flake scars on the dorsal surface.
Metrical Data	Length, breadth, thickness to a tenth of a mm, according to Inizan *et al.* (1999) and Andrefsky Jr (2005), and weight to a tenth of a gram (cores).
Modification	Location and nature of anthropogenic modification (notching, retouch and truncation) on an angle-graded scale: Obtuse; Abrupt; Semi-abrupt; Acute; Semi-acute.
Damage	
Burnt	Extent of thermal impact as 0 (unburnt); 1-Low (heat-crazing and discolouration); 2-Medium (completely calcined but retains form); 3-High (shattered and without indication of original form).
Complete/ Fragment	Based on the present state of the artefact.
Damage	Pre- and post-depositional damage such as abrasion, snaps/breaks (with shape), impact, thermal, edge wear.
Interpretation	
Interpretation	Summary of morphology, typology and function.
Period	Where diagnostic, an estimate for the chronological period to which the artefact may belong.
Notes	Additional descriptive notes and observations.
Chronology	
Post-Medieval	After 1540 cal AD
Late Medieval	1066 – 1540 cal AD
Early Medieval	410 – 1066 cal AD
Roman	43 – 410 cal AD
Iron Age	cal BC 600 – 43 cal AD
Bronze Age	2500 – 600 cal BC
Neolithic	4000 – 2500 cal BC
Mesolithic	c. 10,000 – 4000 cal BC
Palaeolithic	Until c. 10,000 cal BC

GENERAL CHARACTER AND COMPOSITION

A total of 48 lithics was presented for analysis, of which 20 are considered natural (all of chert). This does indicate a good recovery strategy by the project volunteers. The archive spreadsheet includes commentary where there is the possibility that some lithics may be debitage but where this cannot be conclusive given the absence of knapping characteristics and the coarser nature of chert as a raw material. Of the material which can confidently be identified as knapped (by human agency), 19 lithics are of flint and nine of chert. The assemblage composition is summarized in Table 2.

Table 2 Lithic assemblage composition and quantification

Raw Material	Flint	Chert	Total %	Total	
Unburnt	15	7	46%	22	
Burnt	4	2	13%	6	
Natural	–	20	42%	20	Excluded from below
Other	–	–	0%	–	Excluded from below
Total	**19**	**29**	**100%**	**48**	
Type (Knapped only)	**Flint**	**Chert**	**% of Assemblage**	**Total**	
Formal tools	3	3	21.4%	6	
Utilised / Non-formal tools	4	2	21.4%	6	
Debitage	12	4	57.1%	16	
Total	**19**	**9**	**100.0%**	**28**	
Debitage	**Flint**	**Chert**	**% of Assemblage**	**Total**	**% of Debitage**
Cores/fragments	–	–	0.0%	–	0.0%
Blades/fragments	1	–	3.6%	1	6.3%
Bladelets/fragments	–	1	3.6%	1	6.3%
Flakes/fragments/blade-like flakes	9	1	35.7%	10	62.5%
Angular debitage/ indeterminate	1	2	10.7%	3	18.8%
Chips <10mm	1	–	3.6%	1	6.3%
Total	**12**	**4**	**57.1%**	**16**	**100.0%**
Location	**All**		**% of Assemblage**		
Topsoil / Unstratified (001) T1-3	13		46.4%		
Subsoil (002) T1	13		46.4%		
Tumble / Subsoil (008) T2	2		7.1%		
Total	**28**		**100.0%**		

Raw material

The majority of the chipped stone assemblage, excluding natural or likely natural lithcs, is a mix of flint and chert raw materials. The flint is largely of a translucent or semi-translucent type rather than the speckled and mottled flint usually encountered in glacial drift and beach deposits of the Yorkshire coast. The flint is consistent with glacial drift geology in this area of Derbyshire.

The chert displays a mix of hues including brown, grey, black non-shiny and shiny with a few pieces of banded types. As with the flint, the composition is entirely consistent with glacial drift geology related to the chert-inclusive limestone base geology to the east and especially north-west Peak District massifs. No other lithic types were included in the assemblage, such as igneous, metamorphic, quartzite, jasper or other fine-grained stone such as tuff.

Post-deposition damage

The material has light edge chipping consistent with damage caused by movement within a fine soil matrix. For this reason, all figures for likely-utilised pieces are minimum numbers. There is very little patina development on the flints. Sixty-percent of the knapped lithics are fragmentary, whether utilised tool forms or debitage, although it is not possible to suggest whether this is pre- or post-depositional in a landscape which has seen at least medieval and post-medial agricultural regimes in operation.

Burning

Six of the lithics are burnt, representing 21% of the knapped assemblage, against 22 unburnt pieces, 46% of the knapped assemblage. This at least attests to possible hearths or burning events, although the area has also borne witness to post-medieval industrial activity related to the extraction and processing of mineral-ores such as lead.

Technology and chronological indicators

Given the small size of the Leawood Knoll assemblage, and the absence of any coherent reduction or knapping sequences, a narrative about related technological

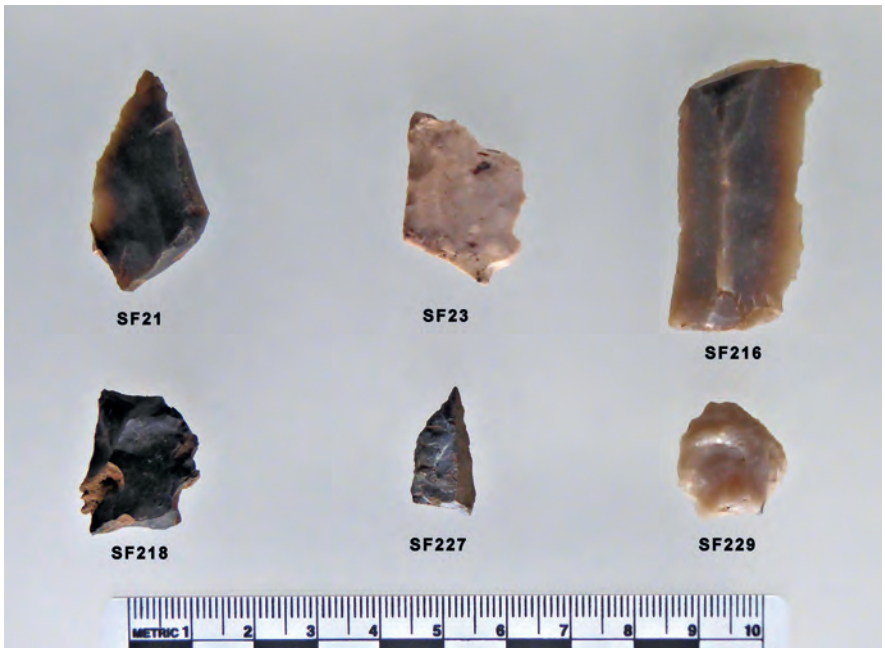

Figure 16 Selected flint and chert lithics from Leawood Knoll.

aspects of flint and chert strategies is necessarily rather limited. Conclusions are therefore difficult to draw beyond presence and absence, and some chronological observations. All the knapped lithics are from topsoil, subsoil and related deposits and so in effect of a residual context.

No cores, core fragments or rejuvenation flakes/tablets are present. The majority of both the tool and debitage pieces indicate a flake-based intent, a likely expedient use of chert as a raw material, but the availability of relatively unflawed flint with reasonable knapping characteristics. Only one flake displayed a hinge fracture (**002,** 40). An angular, irregular chert piece is most probably natural and post-depositionally damaged such that a notional platform edge is fortuitous (**009**, 238).

The following is a description of the six lithics shown in Figure 16:

- **002**, 21 - Flint flake fragment, distal end with edge-damage and possible use-wear.
- **002**, 23 - Flint blade fragment with semi-invasive edge retouch.
- **001**, 216 - Broad and thick flint blade with diffused bulb and broad platform remnant. The distal end is tranchet-like with edge-damage, retouched to an angular point (right). The right edge has edge retouch and edge-damage with a possible retouched notch. This informal 'combination' tool may have served a number of functions.
- **001**, 218 - Irregular flake on black shiny chert with apparent edge-retouch on the left side to a point on the distal end, possibly an expedient side scraper and/or awl-piercer.
- **001**, 227 - While unclear and problematic, this may be either the distal or proximal end of a dark-grey chert blade. If the proximal end, the bulb may have been removed by the microburin technique and oblique truncation, although the chert is somewhat rough in texture and difficult to properly interpret.
- **Unstrat**., 229 - Very small flint flake with a broad platform remnant. The ovate sides and distal end have abrupt semi-invasive retouch removals to an angle of *c*. 80°. While extremely small, this is likely to represent a 'thumbnail' type scraper frequently associated with Beaker period burials in the Late Neolithic to Early Bronze Age.

Of the formal diagnostic tools, three each of flint and chert, there are sufficient characteristics to suggest a later Neolithic to Bronze Age chronology, with evident semi-invasive pressure-flake retouch. This does not, however, preclude the fact that lithics may have been used, or indeed expediently re-used, in post-prehistoric activities (Young and Humphrey 1999).

More equivocal are two chert artefacts: a possible broad-blade microlith fragment (**001**, 227; Figure 16) that, if it is, seems to be obliquely truncated at the proximal(?) end to remove any notional bulb and hence of Early Mesolithic date; a bladelet mesial segment (**016**, 242), while not displaying edge-retouch, would not be out of place in a Late Mesolithic narrow-blade assemblage.

Of the likely later prehistoric formal tools there is a probable flake side scraper (**001**, 218; Figure 16) on black shiny chert which might also have functioned as an awl/piercer combination tool. Also present is a very small but well-executed 'thumbnail' type ovate scraper (**Unstrat**., 229; Figure 16) on a light grey-brown semi-translucent flint flake with a broad platform remnant. This would be consistent with a Beaker-period Late Neolithic to Early Bronze Age assignment.

Of the remaining retouched and utilized lithics of note, semi-invasive pressure-flaking retouch is evident on a light grey-brown semi-opaque blade fragment (**002**, 23; Figure 16) at least 20 mm in length, and a mid-grey-brown semi-translucent flint blade fragment (**001**, 216; Figure 16) that was at least 45mm in length. A flint flake with likely use-wear edge-damage (**002**, 21), and possibly used as an awl or piercer, is illustrated in Figure 16.

CONCLUSION

This small collection has some interesting pieces that paint a picture of human use of the landscape from perhaps the Mesolithic period to the Bronze Age. The majority of the lithics are from residual contexts but do attest to prehistoric activity at or in the vicinity of Leawood Knoll.

VALUE OF THE DATA AND FUTURE POTENTIAL

From a lithics perspective, and even with their modest scale and extent, the lithics indicate probable early post-glacial human activity extending into later prehistoric periods. The finds from both these excavations, as well as those recovered in previous fieldwork, demonstrate the potential for broader-scale fieldwork and the systematic recovery of artefactual and associated palaeoenvironmental evidence as a means of addressing core research questions. Much remains intractable and requires more substantial bodies of chronological data and analysis.

5. The Pottery

C.G. Cumberpatch

The pottery assemblage from Leawood Knoll consisted of a total of 88 sherds of pottery weighing 473 grams and representing a total of 86 vessels. The majority of sherds were extremely small, less than 1 gram in weight. Where contexts are referred to in terms of provenance for artefacts within these specialist assessment chapters, the context number is given in bold type. When specific sherds are referred to, the relevant small find number is given in brackets and preceded by the context number. Where finds from several contexts are referred to, a semicolon separates each context. In a number of instances sherds from the same vessels were recognised, and where they could be shown to join they were recorded together (indicated by the use of the '&' symbol between the small find numbers).

DESCRIPTION OF THE POTTERY

The earliest pottery in the assemblage was of medieval date and included sherds that were identifiable to a number of local potteries as well as a larger component that remain unidentified, a significant problem in central and southern Derbyshire that has yet to be resolved (Cumberpatch 2004a). Identifiable sherds consisted of two pieces of Brackenfield 001 type ware from Trench 2 (**002**, 49, 214) (see Cumberpatch 2004b) and two sherds of Burley Hill 001 type ware from Trenches 1 and 2 (**001**, 102; **002**, 61) (Cumberpatch 2002/2003). Neither of these types are well-dated (as discussed in detail in the articles cited above), and the date ranges proposed are based on the characteristics of the individual sherds and particularly on the character of the glaze. This is not the most reliable method of dating, and the proposed ranges should be considered to be indicative rather than exact.

Other types of medieval pottery have been assigned generic names based on the characteristics of the individual sherds (Buff Sandy ware, Buff-White Sandy ware, Orange Sandy ware, Oxidised Sandy ware, Reduced Sandy ware). The majority, and perhaps all, are of local origin, and their characteristics, particularly the sandy-textured white to buff-white and

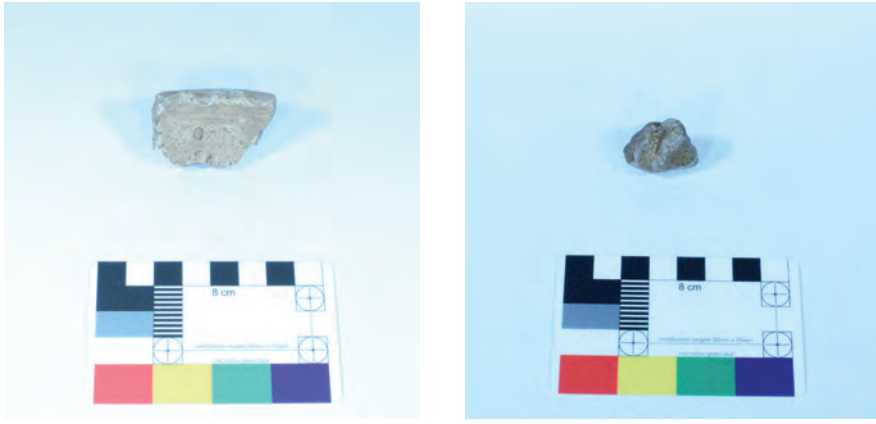

Figure 17 Brackenfield 001 type ware sherd (left) and Burley Hill 001 type ware sherd (right)

orange fabrics, are typical of earlier medieval wares (12th to later 13th century) from the wider region. Two sherds (**002**, 52; 001, 105) were identified as of later medieval type on the basis of the character of the fabrics which were harder and denser in texture than the earlier wares. Although the identification of medieval pottery from the area is never straightforward, in this case the task was made harder by the poor condition of the sherds. All were heavily abraded and this appeared to be the result of mechanical abrasion consistent with the sherds having been exposed on the surface for a considerable time after their initial deposition or of having been redeposited in situations where they were exposed to abrasive forces either during or after the process of re-deposition. These observations are of some significance as the post-medieval and later sherds showed no signs of comparable abrasion, suggesting that they had not been subject to the same types of attrition as had the medieval wares.

Post-medieval wares (dating to the period between *c.* 1450 and *c.* 1600) included a group of sherds of Midlands Purple ware type (**002**, 46; **001**, 83, 106; **016**, 236) dating to the period between the later 15th and early 17th century. Although the term 'Midlands Purple ware' is one that has been used somewhat carelessly and imprecisely over the years, some consensus seems finally to be emerging as to its scope and meaning. The four sherds identified here are typical of the type and have very hard, dense, semi-vitrified fabrics which reflect both the high quality of the clay and the employment of very high firing temperatures during the manufacturing process. Although such wares were probably manufactured widely across the region (and more widely), the closest known centre of production is the village of Ticknall, which was the location of a number of important late medieval, post-medieval and later potteries (Spavold and Brown 2005; Budge in press). This may well have been the source of both the Midlands Purple type ware and the slightly later Blackware and Coarse Blackware sherds (**001**, 77, 107; **002**, 55, 210, 211, 207) from Leawood Knoll. Blackware and Coarse Blackware are typical 17th-century types, distinguished by their fine, dark red, slightly sandy fabrics and shiny black glaze (Cumberpatch 2002). Firing temperatures were significantly lower than those which were used in the manufacture of Midlands Purple ware, and the clays were considerably finer with fewer large quartz grains. Ticknall is again a strong possibility as the source of these sherds.

The early modern period (*c.* 1720 – *c.* 1840) was a period of radical change in the pottery industry, with the development of new ceramic bodies (fine stoneware and refined earthenware) progressing alongside the continued production of traditional or vernacular tablewares and utilitarian wares using locally sourced clays and slip (Cumberpatch 2014). The period was well represented in the Leawood Knoll assemblage and constituted the largest part (by sherd number) of the assemblage.

Vernacular tablewares were prominent in the form of Late Blackware (**001**, 89, 90, 96; **002**, 58, 212; **008**, 65, 69, 66&72; **015**, 234; **T1 unstrat.** 233), Slip Coated ware (**001**, 74; **008**, 261) and Mottled ware (**002**, 14, 59, 209; **T1 unstrat.** 232). Late Blackwares continued the earlier tradition represented by earlier Blackwares although the pattern of glazing and the range of vessel forms both changed, albeit in relatively minor ways. Slip Coated ware could be considered as a variant of Late Blackware although the use of a dark red slip to modify light-firing clay bodies implies the existence of an additional production step purely, it seems, in order to produce a product that would be acceptable to the consumers. Mottled ware is distinguished by its honey-coloured or light brown glaze with prominent darker mottling, usually on a light buff fabric. The distinctive mottled effect was achieved by the use of powdered manganese or iron compounds in the glaze. The majority of sherds in these

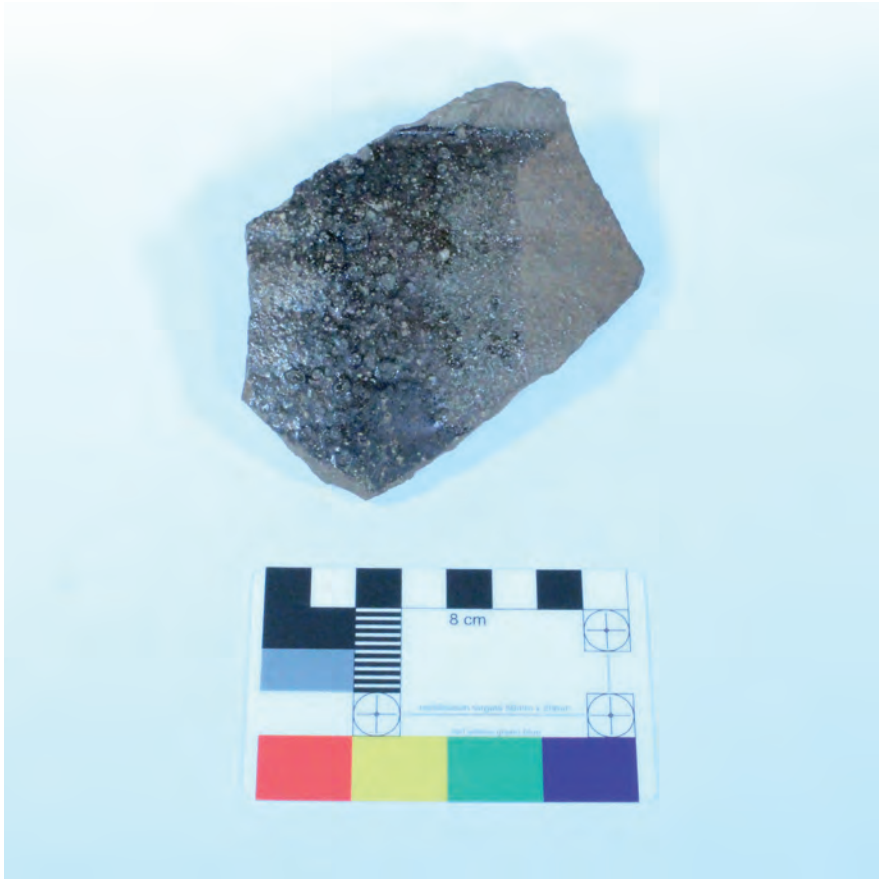

Figure 18 Sherd of Midlands Purple ware from the stone tumble (016) in Trench 3

three ware types were too small for the vessels' forms to be accurately identified, but the majority appeared to be from hollow wares (cups, mugs, small jars, porringers etc.).

Parallel to the continued production of vernacular tablewares in small-scale local potteries, a new generation of innovative potters invested considerable sums of money in the development of pottery factories capable of producing large quantities of fine tableware in a range of new bodies which used imported clays and a range of additives (including calcined bone and flint) to produce vessels of a quality which equalled that of imported porcelain and was far superior to Tin Glazed Earthenware (Delftware). The earliest of these was White Salt Glazed Stoneware (*c.* 1720 – *c.* 1780) represented in the assemblage by two sherds (008, 67, 68), both decorated in the distinctive 'scratch blue' style with incised designs highlighted by the use of blue cobalt-based colourants. Brown Salt Glazed Stoneware, a slightly coarser version of the white variety (perhaps employing refined local clays) used similar technology to that developed much earlier by German potters to produce tablewares which reflected both the vernacular tableware tradition and more modern manufacturing techniques in the production of mugs, tankards and other tablewares. Of the Brown Salt Glazed Stoneware present in the assemblage, the majority was of 18th-century date (**001**, 73, 75, 76, 80, 84, 87, 92, 93, 98; **002**, 50, 57, 206; **008**, 258, 259). Although the size of the sherds made the identification of vessel forms difficult, it appeared that the majority came from mugs or small tankards. Two sherds (**001**, 99; **008**, 259) were from larger vessels, probably cooking pots, dating to the

period between the later 18th and early to mid-19th centuries.

While the manufacture of brown stonewares continued and increased in scale (particularly for cooking wares and retail wares), the development of refined earthenware bodies led to the production of lead-glazed Creamware (*c.* 1740 – *c.* 1820) and Pearlware (*c.* 1780- *c.* 1840) which were cheaper to manufacture and also more suitable for a wider range of decorative motifs than had been the fine white stoneware. Creamware was represented in the assemblage by a number of sherds including plates and a possible bowl (**001**, 88, 95, 97, 101; **008**, 70&71; **T1 Unstrat.** 231). Pearlware sherds were fewer in number (**002**, 47, 53, 54) but included a hand-painted sherd (**002**, 54). One decorated vessel, a piece of Encrusted ware (**T1 Unstrat.** 230) also belonged to the mid- to late 18th or early 19th century. The decorative effect was achieved by rolling slip-coated vessels in small crumbs of dry clay before firing to produce a coarsely granular surface.

Throughout the 18th, 19th and early 20th centuries there was a continuing (and growing) demand for large utilitarian vessels, notably large bowls or pancheons and jars for pickling and the storage of dry goods. This was met by the manufacture (mainly in small-scale potteries but also in factories) of Brown Glazed Coarsewares and slightly smaller Brown Glazed Finewares. Both of these classes were unusually rare at Leawood Knoll being represented by just one sherd in each case (**002**, 57; **008**, 263). Dating these wares is difficult as they have not been the subject of the kind of research seen in the case of other classes of pottery and there seems to have been very little significant change in the shapes of the vessels over time.

The latest pottery in the assemblage consisted of Slip Banded and Cane Coloured wares (**002**, 205; **008**, 64, 257), transfer printed Whiteware (**001**, 81; **008**, 256) and a small number of other types. The first two types represent a broad class of cheap, colourful refined earthenwares which were introduced in the early 19th century and rapidly replaced the vernacular tablewares. Bowls, cooking wares and mugs were amongst the range of vessel types, but the sherds in the assemblage were too small to be identifiable. The two sherds of transfer printed Whiteware (mid- to late 19th century and later) were from a carinated bowl and an unidentified vessel, although the sherds were too small for the transfer printed designs to be identified.

Other sherds included 19th-century stoneware (including a bottle: **001**, 104) and a sherd of Unglazed Red Earthenware, probably from a flowerpot or similar horticultural vessel.

DISCUSSION

The greater part of the assemblage was recovered from just three contexts (001, 002 and 008) with two sherds from context (015), three sherds from the main stone tumble (016) in Trench 3 and a small number of unstratified sherds from Trench 1.

The topsoil across the three trenches (001) produced a very mixed assemblage of pottery consisting of thirty-three sherds weighing 180 grams. The finds from the topsoil were catalogued as a single entity, and the chronological range was wide, with pottery from the medieval to the recent period all represented in the assemblage. The average sherd weight was low at 5.4 grams, but the assemblage showed a marked bimodal distribution in terms of weight with the majority of sherds weighing less than 6 grams and just four sherds weighing 20 grams or more (**001**, 104, 105, 106, 107).

The subsoil in Trench 1 (002) also produced a mixed assemblage of sherds and one with a lower average sherd weight than the topsoil (001) (4 grams). No sherd weighed more than 17 grams. All periods were represented, although medieval pottery was slightly more common than in the topsoil (001). How far such distinctions in a relatively small pottery assemblage are significant is unclear as chance factors can

play a more significant part in structuring and potentially biasing the results in a small assemblage than is the case in a larger assemblage.

The subsoil layer in Trench 2 (008) produced another mixed assemblage with a very low average sherd weight of 1.4 grams and no sherd weighing more than 3 grams. Medieval pottery was represented by just one sherd, and post-medieval pottery was entirely absent. The range of early modern pottery was wide, and the context included both sherds of White Salt Glazed Stoneware. The context also contained both of the joining sherds (**008**, 66&72, 70&71) although the significance of this is unclear.

The developed ploughsoil in Trench 3 (015) produced just two sherds of pottery, one of earlier medieval date and one of early modern date. The four sherds from the 'tumble' in Trench 3 were also of a relatively early date (medieval and post-medieval) and recent pottery was notable by its absence.

Four sherds of unstratified pottery from Trench 1 consisted entirely of early modern wares, including the sherd of Encrusted ware.

Overall, the assemblage was an unusual one from a site that appears to have had a history dominated by rural industry rather than domestic dwellings. The scarcity of larger sherds and of conjoining sherds suggests some degree of bias in the assemblage, although it is difficult to determine the types of actions or processes that might have resulted in the absence of larger sherds from the site, particularly given that the effect was not limited to a specific period or periods of activity.

A site such as Leawood Knoll might have been expected to produce a higher proportion of retail or transport wares, particularly stoneware bottles and flagons, than was the case, although the presence of sherds from one or two 17th-century flasks or costrels may be consistent with the evidence for charcoal burning and wood-drying, tasks that might be expected to have involved the consumption of drink during the process. The seemingly high number of mugs and small tankards, particularly amongst the early modern wares, may also reflect this history, although this does not explain the generally small size of the sherds. The presence of tablewares, particularly the early modern types, is also difficult to explain, particularly as the small size of the sherds does not seem to be consistent with the disposal of domestic refuse on the site. Recovery bias seems unlikely to have been a major factor in structuring the assemblage given the very small size of many of the sherds, which would seem to indicate that considerable care was taken during the excavation with regard to the finds. Further work on the site might be required to resolve this issue.

6. The Other Small Finds

All individual artefacts were cleaned (depending on condition and suitability to various cleaning methods), bagged and assigned individual small find numbers. The bags were marked with site code, small find number, context number, trench number and general artefact type. Each artefact was examined on a clean working surface in natural light by both eye and using a x10 and x20 magnification eye lens. Metrical data relevant to the artefact type in question were captured using digital calipers with plastic tines, accurate to 1/10 mm. Weight was measured with a digital balance accurate to 0.1 g. Each artefact was logged into a spreadsheet as it was examined.

Where contexts are referred to in terms of provenance for artefacts within these specialist assessment chapters, the context number is given in bold type. When specific artefacts are referred to, the relevant small find number is given in brackets and preceded by the context number. Where finds from several contexts are referred to, a semicolon separates each context.

METAL ARTEFACTS

A total of seven pieces of ferrous metalwork were recovered and assessed. Of these, six were fragments of nails or bolts, all heavily corroded and with significant accretions. Such pieces are typical of this kind of artefact up to the widespread adoption of mass-produced smaller fixings in the 20th century. Four of the nails were recovered from the topsoil and subsoil of Trench 1, representing part of a larger multi-period small finds assemblage. The two remaining nails were from Trench 2: one from within the subsoil and the second from the spread bank material. The final piece of ferrous metal recovered was a slightly curved piece of circular wrought iron, again heavily corroded.

Two non-ferrous metal artefacts were recovered and assessed. The first was a tiny fragment of flattened lead sheet from the subsoil of Trench 1 (**002**, 111). The second non-ferrous artefact is potentially more significant: a single hammered and heavily eroded coin or token was recovered from the subsoil of Trench 2 (**008**, 110) (Figure 19). Almost all the detail is now illegible, but the presence of a domed crown above a right-facing bust on the obverse initially suggested that the piece dates to the reign of James I (and VI of Scotland). The piece is unusual, however, in that it appears to be a copper alloy coin; the only denominations of coinage issued in copper by James I, however, were a Scottish penny prior to the unification of the crowns and the farthing after he became King of England (Elks n.d.), neither of which would have carried the bust shown on the obverse of this piece. Subsequent correspondence suggested that the piece is more likely to be a trade token of the late 18th century, though it does not directly correlate with any obvious examples (T. Clayton, pers. comm.).

Evidence of metalworking in or near the site was limited to two separate finds: the first is a single nodule of galena weighing 50.7 grams recovered from the subsoil in Trench 2 (**008**, 267). Given the underlying gritstone bedrock, it seems more likely that this had been introduced onto the site as an unintended inclusion during the improvement of the land through liming. The

Figure 19 (right) Photograph of the obverse of the probable trade token recovered from Trench 2. The piece is circular in form, though the photograph has been taken at an oblique angle to better show the surviving detail. Image © R. & A. Knisely-Marpole

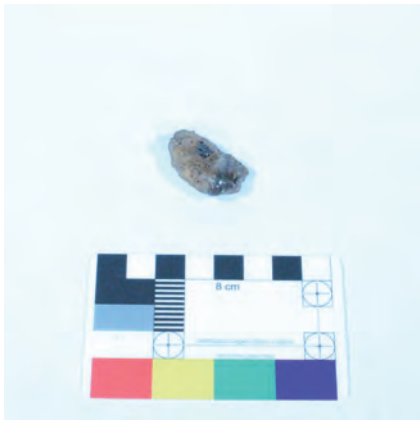

Figure 20 (far right) Piece of lead-fluxed glass slag

second artefact is a piece of porous lead-fluxed glass slag from the topsoil in Trench 1 (**001**, 5), a by-product of lead smelting occurring when lead fluxes accidentally included sand and charcoal to produce globules of glass adhering to pieces of metalliferous slag. Given the presence of extensive lead smelting and working in the local area, this has most likely been incorporated into the soil as part of nightsoiling rather than being indicative of metal working on the knoll itself.

A single brass head from a 'standard' centrefire 12-bore cartridge was recovered from the subsoil in Trench 2 (**008**, 246). It was so heavily corroded that a manufacturer and refined date was not possible; however, it can be broadly ascribed to the period between the adoption of centrefire cartridges and the replacement of paper casings with plastic (*c.* 1870-1950) (Centrefire Cartridge 2010).

GLASS ARTEFACTS

Seven pieces of glass were recovered and assessed, comprising five pieces of sheet glass and two fragments of vessel glass, each from a separate vessel. The two vessel pieces comprised an indeterminate body sherd in light green transparent fabric from the subsoil of Trench 2 (**008**, 63), and a basal piece from the heel of a small bottle in an aqua transparent fabric recovered from the stone tumble of the wall in Trench 3 (**016**, 240). The basal fragment features a section of a pronounced kick in the base of the bottle and shows no mould lines, indicating it was free mouth-blown; unfortunately, the centre of the kick, and therefore indication of a pontil mark, was not present. Although far from diagnostic, the indication that the small bottle was mouth-blown without a mould most likely places it before the widespread adoption of post- and three-piece moulds in the mid-19th century. The sheet glass fragments were all recovered from the topsoil in Trench 1. All but one piece was of a relatively uniform thickness (*c.* 1 mm), and it is possible that all the fragments are from one original larger sheet. The final piece of sheet glass was notable thicker at 2.4 mm.

Given that the glass was only subjected to visual inspection, it was not possible to undertake a detailed analysis of chemical composition. All pieces in the assemblage were either aquamarine or light green, typical of a post-medieval to modern utilitarian assemblage and suggesting a basic soda-lime glass.

CLAY PIPE

A total of 15 pieces of clay tobacco pipes was recovered and assessed, comprising two bowl fragments and 13 stem pieces. Eleven of the pieces came from the topsoil and subsoil of Trench 1, while the remaining four pieces were all recovered from the

topsoil and subsoil of Trench 2, indicating that most, if not all, of the assemblage may have been introduced to the site through the process of nightsoiling and improvement of the agricultural soil.

The two bowl fragments comprised a fragment of bowl base with broken heel (**001**, 3) and a fragment from the back of a separate bowl with relief-moulded foliate pattern along the mould seam (**001**, 1).

The surviving stem fragments ranged from 17.9-42.6 mm in length and had bore diameters ranging from 1.9-2.7 mm (5/64"-7/64"). The majority of the pieces were made from fine ball clay, though at least five had notable inclusions and a slightly coarser fabric suggesting use of a local clay source. A range of burnishing was also evident on the stem pieces. One stem piece featured a poorly executed and eroded stamped relief maker's mark comprising an oval with two sets of initials, one set above the other (**001**, 4). Only the second letter of each pair was legible, with the upper initials ending in 'H' and the lower initials ending in 'M'. A search of local manufacturers has not been able to definitively identify the origin or date for this mark (see Oswald 1975). Overall, there was very little to allow a tight date range to be assigned to the assemblage. In general, the predominantly straight stem pieces, presence of a bowl heel, rudimentary burnishing and utilisation of some local clays may indicate an earlier date, towards the 17th and 18th rather than the 19th or early 20th centuries. Given the size of the assemblage, however, interpretations must be considered tentative.

7. The Faunal Remains

Tiffany Snowden

A small assemblage of faunal remains was recovered and subject to detailed categorisation and assessment. The assemblage comprised 13 fragments dating from the medieval to post-medieval period, most likely representing domestic refuse. Fragments were cleaned (depending on condition and suitability to various cleaning methods), bagged, and assigned individual small finds numbers. The bags were marked with site code, find number, context number, trench number and artefact type. Each fragment was examined on a clean working surface. Where possible, given the variable condition of preservation and size of the individual fragments within the assemblage, the animal bone was assigned to a species and element with any taphonomic information including butchery, gnawing marks or burning described. For the purposes of this assessment, unidentifiable fragments which have been counted were assigned to the categories of small-mammal size (rodent/rabbit/etc), medium-mammal size (sheep/goat/pig) or large mammal-size (cattle/horse). The identifiable fragments of the species represented are given in Table 3 below.

DISTRIBUTION

The assessed pieces were recovered from a single context within Trench 1 and two contexts within Trench 3. The material derived from: subsoil in Trench 1 (002) containing three fragments; stone packing forming the *in situ* core of the drystone wall (013) containing seven fragments; and stone tumble formed from the collapse of the drystone wall (016) containing three fragments.

RESULTS AND DISCUSSION

Species Representation

The assemblage primarily comprised domesticated taxa. Where identifiable, six of the pieces (46.15%) are most likely to be from medium-sized mammals, probably sheep/goat (*ovis*/*capra*). Two of the pieces (15.38%) can be classed as being from large mammals, most likely cattle (*bos*). In addition, two small fragments of bone recovered from Trench 1 have been assigned as probably from domestic fowl, most likely a chicken (*gallus*). A further three bone fragments were recovered; however, the species of the pieces was indeterminate, and all have been assigned to categories of small, medium, or large-sized mammals below.

Element Representation

Of those limited fragments where an identification of skeletal element could be at least tentatively made, the majority were partial long bones, principally from sheep/goat (*ovis*/*capra*), with one fragment a partial section of the proximal end of the humerus belonging to a medium-sized mammal, possibly from a pig (*sus*). Of the bones recovered, five were identified as from long bones, one from a probable scapula, and one from a possible vertebra of a large-sized mammal, the remaining six indeterminable due to the variable size/preservation condition of the assemblage. Of these, one is considered to be from a medium-sized mammal and two possibly from domestic fowl.

Species / Context	002	013	016
Cattle		(1)	
Sheep/Goat		(3)	1
Domestic fowl	(2)	2	
Pig		(1)	
Small-mammal size	2		
Medium-mammal size	1	4	
Large-mammal size		1	
Unidentified		1	2

Table 3 Number of Identified Skeletal Parts (NISP) by species and context

Butchery, Gnawing, and Burning

No finds of bones exhibiting clear signs of butchery were recovered. Five pieces from the assemblage displayed clear signs of burning, two of which, both recovered from within the subsoil in Trench 1 (002), appeared to be heavily calcined, which sits in stark contrast to the remaining fragments with evidence for burning that were slightly blackened and charred. Finally, three pieces from the assemblage contain probable gnawing marks, all of which were recovered within the wall core within Trench 3 (013), which suggests a different type of deposition in this part of the site.

CONCLUSIONS

The assemblage comprised domesticated taxa. The overall preservation of the remains was fair to poor hindering both more specific taxonomic identification and the determinability of taphonomic information. Despite these limitations, the remains of sheep, cattle, and possibly chicken were identified. The discernible species and historic land use of the site as primarily agricultural in the medieval and post-medieval periods suggest that the assemblage represents domestic refuse, most likely dating to the post-medieval period. The presence of burning in the form of charring and calcination, particularly those fragments found in Trench 1 (002) and wall core of Trench 3 (013), further supports this and identifies the variation in deposition of the fragments, as there was no burning evident on remains from the tumble layer in Trench 3 (016). Furthermore, just under half of the fragments in Trench 3 showed evidence of gnawing marks and some fragmentation of the bone due to root disturbance.

RECOMMENDATIONS

The presence of animal bone indicates there is potential for further material to be recovered from the site. As the animal bone assemblage is small, however, primarily consisting of largely unidentifiable fragments and those bones which are identifiable are in a poor condition with any existing taphonomic information generally obscured as a result, no further work is recommended. The assemblage should be retained as a reference for comparison for any further archaeological investigation of the site.

Find No.	Context No.	Material	Taxon	Element	Preservation	Weight (g)	Length (mm)	Width (mm)	Butchery	Burning	Roots/ Gnawing
17	002	Bone	S mammal (Domestic fowl)	Indet.	Poor	0.7	-	-	-	Yes	-
29	002	Bone	M mammal	Indet.	Poor	5	45.8	25.2	-	-	-
119	002	Bone	S mammal (Domestic fowl)	Indet.	Poor	1.1	-	-	Poss.	Yes	-
270	016	Bone	Unknown	Indet.	Fair	8.3	-	-	-	-	-
271	016	Bone	Unknown	Long bone (indet)	Fair	6.6	74.5	-	-	-	-
272	016	Bone	Sheep/goat	Tibia	Poor	23.6	54.7	65.9	-	Yes	-
274	013	Bone	M mammal (Pig)	Humerus	Poor	52.6	94.5	45.9	-	Poss.	-
275	013	Bone	L mammal (Cattle)	Radius	Fair	44.3	122.1	38.3	-	-	Poss.
276	013	Bone	M mammal (Sheep/goat)	Indet.	Fair	3.7	36.5	27.8	-	-	-
277	013	Bone	L Mammal	Vertebra (indet.)	Poor	6.4	-	-	-	Yes	Poss.
279	013	Bone	M Mammal (Sheep/goat)	Scapula	Poor	7.7	35	34.5	-	Poss.	-
281	013	Bone	Unknown	Indet.	Fair	2	-	-	-	-	Poss.
282	013	Bone	M Mammal (Sheep/goat)	Long bone (indet.)	Fair	16	79.6	34.5	-	Yes	Poss.

Table 4 Tabulated faunal remains assemblage information

8. Leawood Knoll in its Context

PREHISTORY AND THE ROMANS

The earliest indications of activity at Leawood Knoll are the flint and chert artefacts recovered through the course of the excavations. Although all came from later, mixed deposits and layers rather than from sealed features indicating *in situ* prehistoric activity on the knoll, their presence does confirm that Neolithic and Bronze Age people were moving through and using this landscape. In addition, the lithic evidence has hinted at an earlier, Mesolithic, presence in the area. This is consistent with the wider picture of the Peak Uplands, where the hunter-gatherers of the post-glacial Middle Stone Age would have found a landscape rich in natural resources.

Through the course of the earlier Lea Wood project (and indeed during its inception) an interpretation of the earthwork enclosure on Leawood Knoll as being of potential late prehistoric origin was mooted. This interpretation was largely based on comparisons between the knoll site and other known late prehistoric hilltop enclosures (commonly 'hillforts') in the Derbyshire uplands, principally in terms of earthwork form, topography and wider landscape setting.

As regards the wider landscape setting of the knoll, it does accord with several criteria common to many of the (presumed or known) late prehistoric hillforts of the Peak: occupying prominent natural high points; overlooking watercourses, often arterial rivers; and making use of natural topography augmented by anthropogenic earthworks (see Waddington and Brightman 2012). In terms of its form, Leawood Knoll is most similar to the enclosure of Crane's Fort above Lathkilldale. This site was first proposed as a hillfort by Hart and Makepeace (1993) and comprises a broad saddle of land with a steep scarp edge into Lathkilldale on the north and a shallower though still well defined slope to the south. As with Leawood Knoll, the long edges of the Crane's Fort enclosure – protected in this case by considerable scarp edges – are enhanced by a low wall, whilst the cross-saddle boundaries comprise a built earthwork. In comparison to Leawood Knoll, however, the cross-saddle boundaries at Crane's Fort are considerably more substantial in form, comprising stone-and-earth banks with external ditch and counterscarp. In places, the principal bank was recorded as standing to a height of 1.5 m in places, and the overall width of the earthwork defences – where best surviving – was 9-10 m (*ibid*. 17).

The three trenches excavated as part of this project were sited, at least partially, to give the best possible chance of establishing whether the knoll monument had late prehistoric origins: testing the form of the scarp-edge earthworks and cross-banks, and examining known internal features identified during geophysical survey. In all cases, no evidence for prehistoric activity was recovered other than the background signature of lithics dating to a much earlier period. In terms of the form of the earthworks investigated, the cross-banks in Trench 2 were dramatically smaller – even given their current truncation – than any analogous site, and the scarp-edge earthwork was demonstrably a revetted lynchet in its earliest form, rather than representing any clear boundary or barrier to movement. Whilst it cannot be

definitively proven that there was no late prehistoric activity on Leawood Knoll, all evidence observed during this project strongly indicates that the remains investigated have their origin in the medieval period.

Despite evidence of late prehistoric activity being currently absent, the early survey work across Lea Wood established a Romano-British presence, illustrated by the occurrence of several 'beehive' querns set into walling and structures in the wood (Smith 2011). Part of an assemblage of 44 separate querns of differing dates, this evidence indicated Lea Wood – and its accessible outcrops of fine-grained sandstone – to be an intermittent focus of quernmaking for c. two millennia. This evidence fits well into what is being increasingly recognised as relatively large-scale late prehistoric and Romano-British quern production on the Ashover Grit along the Derwent Valley (see Ebbins and Palfreyman forthcoming).

Potentially adding to this picture, a series of truncated stone wall bases were identified c. 100 m downslope of the knoll to the south-west, and were interpreted as possible Romano-British period structural remains (C. Hart, pers. comm.). These wall bases extended beneath a large patch of invasive rhododendron which has been gradually cleared by Derbyshire Wildlife Trust volunteers, and in 2014 the visible remains were mapped as part of the original *Lea Wood Heritage Community Project*. The conclusions of this phase of work were that, whilst the wall footings could be late prehistoric or Romano-British in date, they most likely represented medieval or post-medieval activity (Brightman and Walker 2014, 19). In the intervening years, however, all the rhododendron plants have been removed, and more extensive remains are visible, potentially giving us a more detailed insight into the form and age of the remains (R. Walker, pers. comm.). For any future work in Lea Wood, this should be considered a key location of interest.

THE MEDIEVAL LANDSCAPE

Other than the lithic evidence described above, the artefacts recovered during the project indicate that activity on the knoll began in the medieval period, with the earliest ceramics dating to between the 12th and 14th centuries. Acknowledging the danger of extrapolating from a lack rather than a presence of data, it feels a reasonable interpretation that the clearance and initial modification of the knoll occurred during this period, particularly given the volume of abraded medieval pottery recovered from across the site.

During the early centuries of the high medieval period, the landscape of the knoll and surrounding area would have been different to that of today, though perhaps not as far removed as in other parts of the Derbyshire uplands. From the mid-12th century, Lea Wood and the knoll were within the western edge of the Forest of East Derbyshire, part of a continuously forested area stretching from the Derwent to the Trent (Crook 1990, 95). Forests in the medieval period, particularly those areas owned by the crown as Royal Forests were different from the modern conception of the forest as densely set woodland, often marginal and wild in character. It may be that we can blame this on the increasing romanticisation of wilderness through the 18th and 19th centuries, but the medieval forests were areas of the country which covered many types of landscape, and even those areas which were wooded were more likely to be open woodland pasture than dense thicket. Enclosed as royal hunting lands, these areas were subject to strict and punitive forest laws operating outside of common law, though certain rights were permitted or granted to both commoners and the aristocracy.

Representing an effort at reform of forest law, the granting of the Charter of the Forest by Henry III in 1217 enumerated a number of rights in regard to foresters. Building upon broad concessions within Magna Carta two years prior, the Charter of the Forest established the right

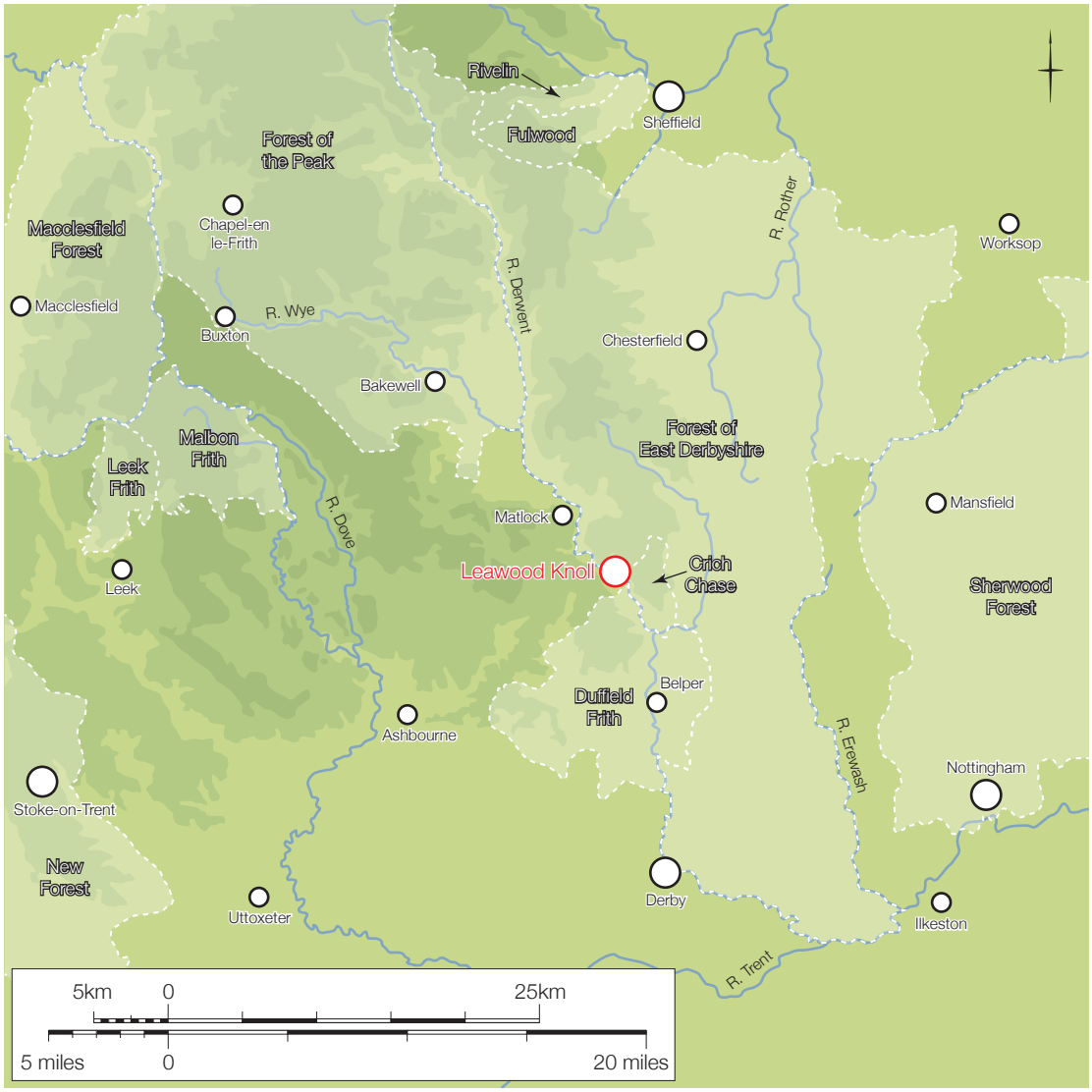

Figure 21 Approximate boundaries of medieval forests within and around Derbyshire. The boundaries are extrapolated and reproduced from a number of sources including Crook (1990), Hey (2008) and Langton and Jones (2010)

of those with private land within forests to *agistment* (grazing), *pannage* (pasturing of swine) and to construct various types of buildings or other agricultural delvings (National Archives 2018). The wider context against which this tension over the rights of people in and around the Royal Forests can be seen is a period of considerable population increase through the 12th and 13th centuries (Hey 2008, 134). Within Derbyshire, the pressure this created led to, among other things, an increase in *assarting*, the process whereby woodland was cleared to create space for arable cultivation (*ibid*., 139).

In addition to enshrining the rights of landholders and foresters, the Charter of the Forest also set in motion the examination of those areas afforested by Henry II in the 12th century, ensuring they were held by trustworthy landowners and allowing for the widescale disafforesting of many areas of land. The Forest of East Derbyshire did not have the longevity of the larger Forest of High Peak to the north-west or Duffield Frith to the south. By 1225 and despite the granting of the Charter of the Forest, a group of secular Derbyshire landowners, suffering from what they saw as oppressive lack of control within forested

Figure 22 View north-east from the knoll showing the shallower and more open land towards Holloway © R. Walker

land, successfully redefined the boundaries of the forested area (Crook 1990, 93). Considering the land of Leawood Knoll, however, it is also perhaps relevant to note that in 1200 King John issued a charter freeing the land of Hubert FitzRalph of Crich from the exactions of foresters, preventing common rights to his land; this ratified an earlier decree removing Crich from the forested land when John had been Count of Mortain under his brother and predecessor Richard I (Crook 1990, 96). If we are looking for a time when land around Lea and Holloway was being brought into agricultural use, then this period of change in the early 13th century appears to be a strong candidate.

Against this backdrop, in particular the disafforesting of great areas and increasing exploitation of woodland resources, the features observed in the excavation trenches fit well. Although the lack of datable evidence means that we cannot be sure of contemporaneity between the two, the creation of an enclosed area bounded by a stone revetted headland – observed in Trench 3 – and the clearance of trees in the area of Trench 1 suggests an assarting of the knoll. When viewed from the Derwent Valley, the enclosure of the knoll top may seem an unusual choice of agricultural land, girt by a steeply sloping woodland. From the adjacent settlements of Lea and Holloway, however, the knoll is still prominent but accessible from a relatively shallow and long slope from the land that now hosts the large house of Lea Hurst. Viewed from this side, the knoll appears as the last usable land before the west-facing slopes above the river.

The enclosed agricultural land on the knoll can be seen as one part of a rural economy which exploited all the available natural resources. Whilst we do not have direct evidence of medieval quarrying, it is likely that at least small-scale stone delving would have taken place where the high-quality local stone was close to or at the surface. One common practice in the woodland pasture of the medieval period was charcoal burning, and evidence excavated during the 2013 excavations further down the hillside from the knoll strongly suggested at least some of the many woodland platforms known were bases for charcoal stands broadly contemporary with the presumed date of the knoll earthworks (Walker *et al.* 2013, 61-3).

CONTINUITY AND CHANGE

Much of the story of Leawood Knoll as told by this project is through the biography of the artefactual evidence. The ceramic finds in particular illustrate the continued use and reworking of the soil from its enclosure, probably around the 13th century, through the following centuries and into the post-medieval and early modern

Figure 23 Remains of a whitecoal kiln on the upper slopes of Lea Wood below the knoll

periods. Diagnostic finds of Midlands Purple ware, potentially manufactured at the Ticknall potteries of southern Derbyshire, provide evidence for activity on the site between the later 15th and early 17th century, along with Blackwares dating to the 17th century.

For the period of the late 16th through to the early 18th century, we can place the agricultural activity on the knoll top within a context of intense industry in the neighbouring Lea Wood. Throughout Lea Wood, previous survey work has identified 18 likely whitecoal kilns – circular wood-drying kilns, often with a stone wall and featuring a downslope channel which gives the features one of their alternative names: 'Q-pits' (see Brightman and Walker 2014). There is a likelihood that charcoal burning also continued through the post-medieval period, but the whitecoal industry was prominent particularly in the period between 1570 and 1740 when it supplied the most efficient source of fuel to the booming local lead industry's ore hearths. The later enclosure wall separating the knoll from the wood perhaps gives a false impression of the division between these two areas. A fine example of a whitecoal kiln survives to the south-east of the knoll enclosure but within the modern parkland, perhaps suggesting that – at least until the later 18th century – we should think of the whole of the hill as one landscape.

If we consider the creation of the original revetted lynchet in the medieval period as more of a stable platform to edge the area of arable agriculture, then the construction of a stout and well-built wall along this edge in the 18th century seems to be a clear statement of enclosure more formal than what had come before. It should be stressed, however, that the section of possible orthostat wall along the south-east cross boundary remains ambiguous and may be earlier. As with the medieval assarting of woodland pasture, the creation of a walled enclosure separating the improved knoll top from the woodland below fits well into the context of sweeping changes in land ownership in the 18th and 19th centuries. Varied forms of enclosure of common land into private hands have occurred throughout a considerable span of British history, but parliamentary enclosure – perhaps the most widespread and formalised period of such events – peaked in the late 18th century (see Neeson 1993).

THE KNOLL INTO MODERN TIMES

If we are to follow the story of the use of Leawood Knoll through the scattered artefact evidence worked into the soil, then it seems likely that the agricultural regime in place since the medieval period continues through into the early modern period. A selection of 19th-century tablewares illustrates the domestic activity in the local area – and the likely continued spreading of rubbish or midden material across the nearby agricultural land. We know that under the ownership of the Nightingale family some of the more readily cultivatable land within Lea Wood was brought into agricultural use; Leawood Farm was built in the mid-18th century and was later divided, with one of the buildings ultimately divided into cottages occupied up to the mid-20th century. The reminiscences of former residents of the buildings in the lower parts of Lea Wood were compiled by the archive research team of the 2013 project, and some were reproduced in the project booklet, providing a tangible and lasting link between the local communities and this landscape (see Brightman and Hawksley 2014).

THE FUTURE

As with any archaeological investigation, in the answering of some questions more are raised. We now have a strong indication that the story of Leawood Knoll, and in particular that of the enigmatic remains still visible as earthworks today, begins in the medieval period. At a time of considerable landscape change and population growth in the 12th and 13th centuries, the marginal land of the knoll top was taken into agricultural use. We may assume that in the 14th century, when a short recovery after years of poor harvests was stopped dead by the catastrophic effects of the Black Death, the productive use of the land may have ceased. Evidence for successive ploughing, however, coupled with a centuries-long biography of artefactual evidence, demonstrates that working and sweetening of the soil continued well into the post-medieval and early modern periods.

The knoll stands as a dominant feature in the local landscape, one of twin sentinel hills over the narrow valley leading east from the River Derwent, casting a shadow over the surrounding villages. It stands at the centre of its hinterland both topographically and in the minds of the local communities.

But questions remain: what part do the rough stone walls outside the main enclosure play? Are all the geophysical anomalies identified through previous survey evidence of only the clearance of woodland or do they represent activity of some other period? Is there evidence of Romano-British or late prehistoric people on the high flanks of Lea Wood below the knoll? The Leawood Knoll project has demonstrated what can be achieved when a local community can come together with the support of wider organisations. We are able to connect more deeply with a special place in the landscape and bring to light a new story, one which we hope will be continued.

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APPENDIX 1 - ARTEFACT CATALOGUES

CERAMIC FINDS CATALOGUE

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
001	73	Brown Salt Glazed Stoneware	1	0.5	1	BS	Hollow ware	Brown salt glaze int & ext	C18th	
001	74	Slip Coated ware	1	1	1	BS	Hollow ware	Thin red slip on a pale orange body; brown glaze	C18th	
001	75	Brown Salt Glazed Stoneware	1	0.5	1	Rim	Hollow ware	Brown salt glaze int & ext	C18th	
001	76	Brown Salt Glazed Stoneware	1	0.5	1	BS	Mug/ tankard	Rilled band ext; brown salt glaze int & ext	C18th	
001	77	Blackware	1	1	1	BS	Hollow ware	Dark brown glaze int & ext	C17th	Fine dark red fabric
001	79	Stoneware	1	1	1	Rim	Bowl/dish	Brown glaze int & ext; salt?	C18th	Small everted rim
001	80	Brown Salt Glazed Stoneware	1	0.5	1	BS	Hollow ware	Pale brown salt glaze int & ext	C18th	
001	81	TP Whiteware	1	1	1	BS	Hollow ware	Blue dendritic design ext	Mid – late C19th	Discoloured, perhaps burnt
001	82	Stoneware	1	0.5	1	BS	Hollow ware	Brown ext, grey int; lead glazed	Mid – late C19th	
001	83	Midlands Purple type ware	1	2	1	BS	Hollow ware	Purple glaze ext; glaze fuming int	Late C15th – early C17th	Hard, dense, semi-vitrified purple fabric
001	84	Brown Salt Glazed Stoneware	1	0.5	1	BS	Hollow ware	Pale brown salt glaze int & ext	C18th	

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
001	85	Stoneware	1	1	1	BS	Hollow ware	Rilled band ext w/ brown glaze; pale green glaze int	Mid – late C19th	
001	86	Reduced Sandy ware	1	2	1	BS	Hollow ware	U/Dec (very heavily abraded)	Medieval	Abundant angular quartz up to 1mm, mainly finer in a pale orange to grey body
001	87	Brown Salt Glazed Stoneware	1	1	1	Base	Mug/ tankard	Brown salt glaze int & ext	C18th	
001	88	Creamware	1	0.5	1	Flake	Hollow ware	U/Dec	*c.* 1740 – *c.*1820	External flake
001	89	Late Blackware	1	1	1	BS	Hollow ware	Black glaze int & ext	C18th	Hard, dense orange fabric w/ fine red & white rock frags & rare quartz
001	90	Late Blackware	1	1	1	BS	Hollow ware	Black glaze int & ext	C18th	Hard, dense orange fabric w/ fine red & white rock frags & rare quartz
001	91	Unglazed Red Earthenware	1	0.5	1	BS	Hollow ware	Red slip ext	Late C18th – C19th	
001	92	Brown Salt Glazed Stoneware	1	1	1	BS	Hollow ware	Brown salt glaze int & ext	C18th	
001	93	Brown Salt Glazed Stoneware	1	0.5	1	BS	Hollow ware	Mottled brown glaze int & ext	C18th	
001	94	Stoneware	1	0.5	1	BS	Hollow ware	Rilled band ext w/ dark brown glaze ext	C18th	
001	95	Creamware	1	2	1	BS	Hollow ware	U/Dec	*c.* 1740 – *c.* 1820	
001	96	Late Blackware?	1	2	1	BS	Hollow ware	Dark glaze int & ext; burnt & discoloured	C18th	Very heavily burnt

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
001	97	Creamware	1	2	1	Rim	Bowl?	U/Dec	*c.* 1740 – *c.* 1820	
001	98	Brown Salt Glazed Stoneware	1	5	1	Base	Mug/ tankard	Rilled band above base; pale brown ext, pale green int	C18th	Salt glaze?
001	99	Brown Salt Glazed Stoneware	1	4	1	BS	Bowl	Rouletted wavy line ext	Late C18th – C19th	Heavily burnt
001	100	Orange Sandy ware	1	4	1	BS	Hollow ware	U/Dec; heavily abraded	C12th – C13th?	Dull orange fine fabric w/ moderate, poorly sorted quartz & red grit up to 1mm, mainly finer
001	101	Creamware	1	2	1	BS	Plate	U/Dec	*c.* 1740 – *c.* 1820	
001	102	Burley Hill 001 type	1	6	1	BS	Hollow ware	Green glaze ext	C13th – C14th?	Fine dark grey sandy fabric w/ abundant quartz up to 0.5m
001	104	Salt-glazed stoneware	1	20	1	BS	Bottle	Pale grey salt glaze ext only	Late C18th – C19th	Pale grey stoneware
001	105	Late Medieval Sandy ware	1	35	1	Base	Hollow ware	Red slip int & ext	C14th – C15th	Hard, dense, dull red fabric w/ moderate poorly sorted quartz & round red grit up to 0.4mm
001	106	Midlands Purple type ware	1	60	1	Rim	Jar	Everted rim w/ a thumbed band below rim	Late C15th – early C17th	Hard, dense semi-vitrified dull buff body w/ abundant fine quartz
001	107	Blackware type	1	20	1	Rim	Bowl	Everted rim w a ridge at base of neck	C17th	Hard, fine dark red fabric
		Sub-total	**33**	**180**	**33**					

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
002	11	Oxidised Sandy ware	1	3	1	BS	Hollow ware	U/Dec; heavily abraded	C12th – C13th?	Dull orange ext, grey int; abundant quartz up to 0.5mm, occ larger
002	13	Creamware	1	3	1	BS	Flatware	U/Dec	*c.* 1740 – *c.* 1820	
002	14	Mottled ware	1	0.5	1	BS	Hollow ware	Rilled band ext dark mottled glaze int & ext	C18th	Buff fabric w/ sparse fine white rock frags
002	15	Stoneware	1	1	1	BS	Hollow ware	Pale brown int, pale green lead glaze ext	C19th	
002	16	Buff-White Sandy ware	1	3	1	BS	Hollow ware	Flaky dull yellow glaze on one side	Medieval	Buff-white fabric w/ abundant sub-round quartz & red grit up to 0.5mm, occ larger
002	46	Midlands Purple type ware	1	11	1	BS	Hollow ware	U/Dec	Late C15th– early C17th	Hard, dense, semi-vitrified dull brown to grey body w/ abundant quartz grit
002	47	Pearlware	1	1	1	BS/ Flake	Flatware	Blue-white glaze on surviving surface	*c.* 1780 – *c.* 1840	
002	48	Oxidised Sandy ware	1	6	1	BS	Hollow ware	Thin patchy green glaze int, flaked & abraded	C12th – C13th	Soft dark orange sandy fabric w/ moderate, well-sorted quartz up to 1mm, occ larger & sparse finer red grit

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
002	49	Brackenfield 001 type ware	1	3	1	BS	Hollow ware	Thin pale green flaky glaze ext	C12th – early to mid C13th?	Fine white sandy fabric w/ sparse/ moderate quartz up to 0.5mm
002	50	Brown Salt Glazed Stoneware	1	1	1	BS	Hollow ware	Brown salt glaze int & ext	C18th	
002	51	Oxidised Sandy ware	1	2	1	BS	Hollow ware	U/Dec; heavily abraded	C12th – C13th?	Small, very heavily abraded fragment in a dull orange sandy fabric w/ moderate fine quartz, red grit & possible mica
002	52	Late Medieval Sandy ware	1	7	1	BS	Hollow ware	U/Dec	C14th – C15th	Hard, dense buff fabric w/ abundant common, round quartz & red grit up to 0.4mm
002	53	Pearlware	1	1	1	Ring foot base	Dish/ bowl	Blue-white glaze int & ext	*c.* 1780 – *c.* 1840	Angular ring foot
002	54	Pearlware	1	2	1	BS/ flake	Flatware?	Hand-painted curvilinear design int	*c.* 1780 – *c.* 1840	
002	55	Blackware type	1	1	1	BS	Hollow ware	Discoloured(?) dull green glaze int & ext	C17th	Dull fine red fabric
002	57	Brown Glazed Fineware	1	6	1	BS	Hollow ware	Brown slightly mottled glaze int & ext	C18th	Fine, streaky pale orange fabric
002	58	Late Blackware	1	1	1	BS	Hollow ware	Black glaze int & ext	C18th	
002	59	Mottled ware	1	1	1	BS	Hollow ware	Mottled glaze int & ext	C18th	Overfired grey fabric
002	61	Burley Hill 001 type	1	3	1	BS	Hollow ware	Green glaze ext; spots of clear (splashed) glaze int	C13th	Dark grey sandy fabric

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
002	205	Cane Coloured ware	1	0.5	1	BS	Hollow ware	U/Dec	C19th	Crazed & abraded int & ext
002	206	Brown Salt Glazed Stoneware	1	1	1	BS	Hollow ware	Rilled band ext; brown salt glaze int & ext	C18th	
002	207	Coarse Blackware	1	3	1	BS	Hollow ware	Blistered black glaze ext only	C17th – early C18th	Hard red fabric w/ abundant quartz up to 0,5mm, rarely larger
002	208	Oxidised Sandy ware	1	3	1	BS	Hollow ware	Thin green glaze ext, heavily abraded	C12th – C13th	Dull orange to dull brown sandy fabric w/ sparse quartz up to 0.5mm
002	209	Mottled ware	1	3	1	BS	Hollow ware	Mottled brown glaze int & ext	C18th	Light fine buff fabric w/ sparse buff rock frags & fine black grit
002	210	Blackware	1	4	1	BS	Costrel/ flask	Black glaze ext only	C17th	Fine hard dark red fabric
002	211	Blackware	1	9	1	BS	Costrel/ flask	Black glaze ext only	C17th	Fine hard dark red fabric
002	212	Late Blackware	1	5	1	Rim	Bowl	Black glaze int & ext; secondarily burnt	C18th	Fine red fabric; small, sharply everted rim; heavily burnt
002	213	Oxidised Sandy ware	1	15	1	Base	Hollow ware	Thin partial green glaze int, flaked & abraded	C12th – C13th	Dark orange body w/ a thin grey core; sparse to moderate, well-sorted quartz up to 0.5mm

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
002	214	Brackenfield 001 type ware	1	17	1	Rim	Dish/ bowl	Wide everted rim w/ raised lip & a patch of pale green glaze	C12th – early to mid C13th	White sandy fabric w/ moderate sub-round quartz up to 1mm & platy red grit
		Sub-total	**29**	**117**	**29**					
008	64	Cane Coloured ware	1	0.5	1	BS	Hollow ware	Trace of a white slip line ext	C19th	
008	65	Late Blackware	1	0.5	1	BS	Hollow ware	Black glaze int & ext	C18th	Fine red fabric
008	67	White Salt Glazed Stoneware	1	1	1	Rim	Cup/bowl	Scratch blue int & ext; herring bone pattern ext	*c.* 1720 – *c.* 1780	
008	68	White Salt Glazed Stoneware	1	2	1	Ring foot base	Bowl	Scratch blue curvi-linear design ext	*c.* 1720 – *c.* 1780	Angular ring foot base
008	69	Late Blackware	1	1	1	BS	Hollow ware	Black glaze int & ext	C18th	Fine red fabric; heavily burnt
008	256	TP Whiteware	1	2	1	BS	Carinated bowl	Pale blue geometric TP bands int & ext	Mid – late C19th	
008	257	Slip Banded ware	1	2	1	BS	Hollow ware	Red-brown broad slip band ext	C19th	
008	258	Brown Salt Glazed Stoneware	1	0.5	1	BS	Hollow ware	Rilled band ext	C18th	
008	259	Brown Salt Glazed Stoneware	1	2	1	Rim	Dish/ bowl	Mottled brown salt glaze int & ext	Mid C18th – early C19th	Sharply everted flat rim
008	260	Brown Salt Glazed Stoneware	1	0.5	1	BS	Hollow ware	Brown glaze int & ext	C18th	
008	261	Slip Coated ware	1	1	1	BS	Hollow ware	Thin red slip int & ext under dark glaze	C18th	Buff fabric w/ moderate, well-sorted buff rock frags

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
008	262	Buff-White Sandy ware	1	2	1	BS	U/Dec	U/Dec (very heavily abraded)	Medieval	Soft sandy fabric w/ abundant angular/ sub-angular quartz up to 1m, occ up to 1.5mm
008	263	Brown Glazed Coarseware	1	2	1	BS	Bowl?	Brown glaze int; ext flaked	Late C18th – C19th	
008	66 & 72	Late Blackware	2	2	1	BS	Hollow ware	Black glaze int & ext	C18th	Fine red fabric
008	70 & 71	Creamware	2	3	1	BS/ Flake	Hollow ware	U/Dec	*c.* 1740 – *c.* 1820	
		Sub-total	**17**	**22**	**15**					
015	234	Late Blackware	1	8	1	BS	Hollow ware	Black glaze int & ext	C18th	Fine dense red fabric w/ sparse red grit
015	235	White Sandy ware	1	6	1	BS	Hollow ware	Patchy clear splash glaze ext	C12th – early to mid C13th	White fabric w/ a thin brown core; fine sandy fabric w/ moderate red grit up to 0.5mm, occ up to 1mm
		Sub-total	**2**	**14**	**2**					
016	236	Midlands Purple type ware	1	118	1	BS/ Rim	Jar	Patchy purple blistered glaze int & ext	Late C15th – early C17th	Hard, dense semi-vitrified purple fabric w/ abundant sub-round quartz up to 0.5mm, occ larger

Context	SFN	Type	No	Wt	ENV	Part	Form	Decoration	Date range	Notes
016	243	Buff Sandy ware	1	2	1	BS	Hollow ware	U/Dec; heavily abraded	C12th – C13th?	Buff/pale orange sandy fabric w/ sparse fine quartz & red grit
016	269	Buff-White Sandy ware	1	8	1	BS	Hollow ware	Thin flaky clear glaze int; splashed?	C12th – early to mid C13th?	Moderate quartz up to 1mm in a fine white sandy body
		Sub-total	**3**	**128**	**3**					
U	230	Encrusted ware	1	2	1	BS	Hollow ware	Pale brown glaze; encrusted body ext	Mid C18th – early C19th	Fine buff body
U	231	Creamware	1	2	1	BS/ Flake	Flatware	U/Dec	*c.* 1740 – *c.* 1820	Flaked int & ext
U	232	Mottled ware	1	2	1	BS	Hollow ware	Mottled glaze int & ext; ridge ext	C18th	Fine pale buff sandy fabric
U	233	Late Blackware	1	6	1	Footed base	Hollow ware	Black glaze int & ext	C18th	Black glaze int & ext
		Sub-total	**4**	**12**	**4**					
		Total	**88**	**473**	**86**					

Site Information				Raw Material		Technology					Date	Notes
Context	Feature / Trench	SF No.	Notes (Site / Context)	Material Type	Material Colour	Tool / Utilised / Debitage	Primary Type (Blank)	Secondary Type (Modified)	Reduction 1=Primary | 2=Secondary | 3=Tertiary	Burnt	Period	Metrics only for complete debitage & tools
(002)	1	19	Subsoil	Flint	White	D	Flake fragment	Debitage	2	Yes	Prehistoric?	Hard cream cortex. distal end, possible edge-wear.
(002)	1	20	Subsoil	Chert	White	U	Blade fragment	Blade >30	3	No	Prehistoric	Proximal end.
(002)	1	21	Subsoil	Flint - Translucent	Grey-brown	U	Flake fragment	Flake >30	3	No	Prehistoric	Distal end with edge-damage / usewear.
(002)	1	22	Subsoil	Flint - Translucent	Mid brown	D	Flake	Flake >15	3	No	Prehistoric	
(002)	1	23	Subsoil	Flint - Opaque	Light grey-brown	T	Blade fragment	Blade >20	3	No	Neolithic?	Semi-invasive edge retouch.
(002)	1	24	Subsoil	Chert	Mid grey	D	Angular debitage	Debitage	3	Yes		
(002)	1	25	Subsoil	Flint	White	D	Angular debitage	Debitage	3	Yes		
(002)	1	26	Subsoil	Flint	Dark brown	D	Blade fragment	Blade >15	3	No	Prehistoric	Distal end, no visible retouch.
(002)	1	27	Subsoil	Chert	Dark grey-brown	N	Natural lump				Natural	
(002)	1	28	Subsoil	Chert	Mid brown	N	Natural lump				Natural	

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(002)	1	38	Subsoil	Chert	Mid brown	N	Natural lump				Natural	
(002)	1	39	Subsoil	Flint - Translucent	Mid brown	D	Flake	Debitage	3	No	Prehistoric	Diffused bulb, L 14.9mm, W 14.1mm.
(002)	1	40	Subsoil	Flint - Semi-translucent	Light grey-brown	D	Flake	Debitage	3	No	Prehistoric	Diffused bulb, hinge fracture, L 18.5mm, W 18.2mm.
(002)	1	41	Subsoil	Chert	Cream	N	Natural flake			No	Natural	
(002)	1	42	Subsoil	Chert	Dark grey	N	Natural fragment			No	Natural	
(002)	1	43	Subsoil	Chert	Mid grey	N	Natural lump			Yes	Natural	
(002)	1	44	Subsoil	Flint - Translucent	Mid brown	D	Blade-like flake	Debitage	3	No	Prehistoric	Diffused bulb, distal end missing.
(002)	1	45	Subsoil	Flint - Semi-translucent	Mid grey-brown	D / U	Flake	Flake >20	2	No	Prehistoric	Hard cream cortex. Distal end, possible edge-wear.
(002)	1	200	Subsoil	Chert	Mid grey-brown	N	Natural fragment			Yes	Natural	Possibly debitage but equivocal.
(002)	1	201	Subsoil	Flint - Translucent	Mid brown	D	Flake fragment	Flake >20	2	No	Prehistoric	Hard cream cortex, distal end, edge damage on break is probably fortuitous / taphonomy.
(002)	1	202	Subsoil	Chert	Mid grey-brown banded	N	Natural fragment			No	Natural	Possibly debitage but equivocal.
(002)	1	203	Subsoil	Chert	Dark grey	N	Natural lump			Yes	Natural	

Site Information				Raw Material		Technology					Date	Notes
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(002)	1	204	Subsoil	Chert	Dark grey	N	Natural lump			Yes	Natural	
(001)	-	215	Topsoil	Chert	Light brown	N	Natural flake			No	Natural	Removals are likely taphonomy, possibly debitage but equivocal.
(001)	-	216	Topsoil	Flint - Semi-translucent	Mid grey-brown	T	Blade	Edge-retouched / utlized blade >45	3	No	Neolithic-Bronze Age	Broad and thick blade with diffused bulb and broad platform remnant. Distal end is tranchet-like with edge-damage, retouched to an angular point (right). Right edge has edge retouch and edge-damage with a possible retouched notch. The informal 'combination' tool may have served a number of functions. L 41.7mm, W 21.0mm, T 8.9mm.
(001)	-	217	Topsoil	Chert	Dark grey-black	D	Angular lump			No	Natural?	Possibly debitage but equivocal.
(001)	-	218	Topsoil	Chert	Black shiny	T?	Irregular flake	Side-scraper?	2	No	Prehistoric	Irregular flake with apparent edge-retouch on left side to a point on the distal end. Possibly an expedient side scraper and/or awl-piercer. L 24.3mm, W 24.9, T 8.7mm.
(001)	-	219	Topsoil	Chert	Dark grey-brown	N	Natural lump			No	Natural	

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(001)	-	220	Topsoil	Chert	Light brown speckled	N	Natural flake			No	Natural?	Possibly debitage but equivocal. Duplicate SF No.
(001)	-	220	Topsoil	Chert	Mid grey	N	Angular lump			Yes	Natural?	Possibly debitage but equivocal. Duplicate SF No.
(001)	-	221	Topsoil	Flint - Translucent	Light brown	U	Flake fragment	Non-formal tool / utilized	3	No	Prehistoric	Diffused bulb with narrow platform remnant, distal end missing(?). Right edge damage is likely use-wear rather than edge-retouch or post-depositional damage. Duplicate SF No.
(001)	-	221	Topsoil	Chert	Dark brown banded	N	Angular lump			No	Natural	Duplicate SF No.
(001)	-	222	Topsoil	Chert	Dark grey	N	Natural fragment			No	Natural	
(001)	-	223	Topsoil	Flint - Semi-translucent	Mid brown	D?	Flake	Flake >15	2	No	Prehistoric?	Possibly debitage but uncertain.
(001)	-	224	Topsoil	Chert	Dark grey-black non-shiny	U?	Blade fragment	Blade >20	3	No	Prehistoric?	Left edge damage is possibly use-wear, distal end missing.
(001)	-	225	Topsoil	Chert	Mid-brown	D	Flake fragment	Flake >15	3	No	Prehistoric?	Possibly debitage. Small micro-flake removals at proximal(?) end may be fortuitous; orientation is unclear.

Site Information				Raw Material		Technology					Date	Notes
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(001)	-	226	Topsoil	Flint	Dark grey	D	Flake fragment	Flake >10	3	Yes	Prehistoric	
(001)	-	227	Topsoil	Chert	Dark grey	T?	Blade fragment	Blade >20	3	Yes	Mesolithic?	While unclear and problematic, this may be either the distal or proximal end of a dark-grey chert blade. If the proximal end, the bulb may have been removed by the microburin technique and oblique truncation, although the chert is somewhat rough in texture. W 9.8mm.
(001)	-	228	Topsoil	Chert	Light grey-brown banded	N	Natural fragment			No	Natural	Possibly debitage but equivocal.
–	1	229	Unstrat	Flint - Semi-translucent	Light grey-brown	T	Flake	Ovate scraper	3	No	Early Bronze Age	Very small flake with a broad platform remnant. The ovate sides and distal end have semi-invasive retouch removals to an angle of c. 80 deg. While extremely small, this is likely to represent a 'thumbnail' type scraper frequently associated with Beaker period burials in the Late Neolithic to Early Bronze Age. L 17.7mm, W 15.0mm, T 7.9mm.

Site Information				Raw Material		Technology					Date	Notes
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(001)	3	237	Unstrat	Flint - Semi-translucent	Light grey-brown	D / U	Flake	Flake >15	3	No	Prehistoric	Regular flake with a broad platform remnant and pronounced bulb. Edge damage might be use-wear but may also be post-depositional. L 23.3mm, W 22.4mm, T 7.0mm.
(009)	2	238	Stone spread of bank material	Chert	Mid brown	N?	Angular lump			No	Natural?	Likely a natural irregular fragment of chert. There is a notional 'platform' edge (viable in principle) with some edge damage, but this is likely to be fortuitous and post--depositional taphonomy.
–	3	241	016	Chert	Mid grey	N	Flake fragment			No	Natural?	Possibly debitage but equivocal.

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–	3	242	016	Chert	Dark black-brown non-shiny	D / T	Bladelet fragment	Blade >10	3	No	Late Mesolithic?	Mesial segment of a narrow, parallel-sided bladelet. There are no clear indications of edge-retouch or convincing use-wear, although one side is steeply undercut, in the notion of a backed bladelet. While uncertain, the form and regularity of the surving fragment would not be out of place in a Late Mesolithic assemblage. W6.4mm, T 2.7mm with two blade dorsal blade scars.
(008)	2	249	Subsoil	Flint	Light grey	D	Flake fragment		3	Yes	Prehistoric	
(008)	2	250	Subsoil	Flint - Translucent	Light brown	D	Flake fragment	Flake <10	2	No	Prehistoric	Possibly debitage but equivocal.
(008)	2	251	Subsoil	Chert	Mid grey-brown banded	N	Natural flake			No		
(008)	2	252	Subsoil	Chert	Mid grey-brown	N	Angular lump			No		Possibly debitage but equivocal.
(008)	2	253	Subsoil	Chert	Drak grey-black shiney	N	Angular lump			No		

The hill of Lea Wood stands, with its twin Bow Wood, on the east side of the Derwent Valley to the south of the industrial crucible of Cromford. It looms over the narrow defile of the Lea Brook and stands prominent over the villages around it. A known focus for medieval and post-medieval woodland industry, the summit of the hill is crowned by an enigmatic earthwork enclosure, hinting at activity in earlier centuries - and possibly millennia.

In spring 2017, a group of local volunteers, with support from the Heritage Lottery-funded DerwentWISE Landscape Partnership and Derbyshire County Council, mounted an archaeological investigation of the remains on Leawood Knoll. This volume tells the story of that project and the discoveries that were made.

SOLSTICE

DerwentWISE

DERBYSHIRE County Council

Dethick, Lea and Holloway Heritage Group

Funding raised by The National Lottery
and awarded by the Heritage Lottery Fund

heritage lottery fund
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ISBN 9780993310638

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