

# Archaeological Fieldwalking Survey at Holme Hall Quarry, South Yorkshire



Archaeological fieldwalking at Holme Hall Quarry.

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ARS Ltd Report 2015/28

Archaeological Research Services Ltd

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## ***EXECUTIVE SUMMARY***

*Archaeological Research Services Ltd was commissioned by Wardell Armstrong LLP on behalf of Hope Construction Materials to undertake an archaeological fieldwalking survey ahead of a Review of Old Minerals Permissions for a number of historic minerals permissions at Holme Hall and Stainton Quarries, in the parishes of Edlington and Stainton, South Yorkshire.*

*The results of the archaeological fieldwalking survey revealed a total of 327 artefacts comprising 73 worked flints, 18 unworked flints, 115 sherds of pottery, 93 fragments of ceramic building materials and 28 miscellaneous objects. Nine pieces of ironstones were also retrieved. There is a general medium to high frequency of modern and post-medieval material which appears to be residual.*

*The medieval period is almost completely unrepresented in the material recovered although fifteen pieces of possible late medieval pottery were retrieved mainly from fields N8 and N4. It is possible that this material may also be residual due to the fragmented and rather abraded condition.*

*Romano-British pottery occurs in low frequency although the majority of the sherds represent a distinct cluster within the northern area of field N8. This cluster is also located within and around a probable ditched enclosure identified by the geophysical survey, which may be regarded as a potential site of significance.*

*The prehistoric material recovered during the survey consists of 73 flint artefacts. There may be up to three areas of high density which may indicate evidence for settlements or other prehistoric activity. It is apparent that the assemblage is a palimpsest comprising the residue of human activity extending from the Mesolithic through to the Neolithic and possibly even the early Bronze Age. The size of the assemblage may suggest that there was episodes of occupation or maybe sustained activity in the immediate environs of the site during the Mesolithic – Neolithic periods.*

## 1 INTRODUCTION

### 1.1 Scope of work

1.1.1 Archaeological Research Services Ltd (ARS Ltd) was commissioned by Wardell Armstrong LLP on behalf of Hope Construction Materials (HCM) to undertake an archaeological fieldwalking survey at Holme Hall Quarry, which is situated in the parishes of Edlington and Stainton, in the Doncaster District of South Yorkshire. The survey forms part of a programme of works related to a Review of Old Mineral Permissions process for Holme Hall Quarry (Planning reference: 94/72/3583/P/MIN).

1.1.2 An early desk-based assessment (Symonds 1993) and fieldwalking survey (Merrony 1994) were conducted for parts of the site shortly after the introduction of PPG16. A desk-based assessment in line with modern standards and requirements has been prepared by ARS Ltd (Brown 2014) together with a geophysical survey (Durkin 2015) for the remaining areas of Holme Hall Quarry that have not yet been extracted. These documents should, therefore, be used in conjunction with this report.

1.1.3 This report deals with the archaeological fieldwalking survey which has been carried out under the *National Planning Policy Framework (NPPF)* (DCLG 2012). The NPPF sets out the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. The purpose of the NPPF is to contribute to the achievement of *sustainable development*, which includes "...contributing to, protecting and enhancing our natural, built and historic environment..." (DCLG 2012, 30).

### 1.2 Location, land use and geology

1.2.1 The area subject to the archaeological fieldwalking survey consisted of six fields surrounding Cockhill House Farm, which is bounded to the north-west by the M18 motorway, to the west by Cockhill Lane, to the south by the B6094 (Long Gate) and elsewhere by field boundaries. This area is known as 'Cockhill West' and 'Cockhill East', divided by the north/south oriented Rakes Lane (Fig. 1). The fields concerned here have previously been the subject of an archaeological fieldwalking survey undertaken during August, October - December 1993, and May 1994, by teams from ARCUS (Merrony 1994). The fields were coded with numbers preceded by the letter N (representing the northern side of the proposed quarry area). A plan of the site has been produced showing the fields surveyed with their previously assigned codes which are used here for consistency (Fig. 2). However, due to subsequent slight amalgamation of fields, a concordance of the modern names was given to them as part of the recent desk-based assessment (Brown 2014). Thus, a combination of formerly assigned codes and recent names are used in this report.

1.2.2 The underlying solid geology of the site largely comprises Dolomitised Limestone and Dolomite of the Cadeby Formation, which formed approximately 251 to 271 million years ago in the Permian period (DiGMapGB-50-WMS) and is widely referred to as 'Magnesian Limestone'. There is also a band of Calcareous Mudstone of the Edlington Formation along the north-eastern edge of Holme Hall Quarry, which formed during the same period. The bedrock is overlain in places by a discrete superficial deposit comprising Mid Pleistocene Glaciofluvial Sand and Gravel which formed as a result of glaciation during the Quaternary

up to 2 million years ago (DiGMapGB-50-WMS). This discrete area is located in the Batty Holt North area of the quarry, and has largely been removed by quarrying, but partially survives beneath a block of Ancient Woodland which has been left in situ in this area.

1.2.3 In the areas of limestone geology where the overlying soils have not been removed as a result of quarrying activity, they are classified as belonging to the ABERFORD Soil Association (511a), which are typical brown calcareous earths (SSEW 1983a). These soils form over Permian, Jurassic and Eocene limestone, and are characterised as “Shallow, locally brashy, well drained calcareous fine loamy soils over limestone. Some deeper calcareous soils in colluvium” (SSEW 1983b, 7). Overlying the mudstone geology along the eastern edge of the quarry, the soils are classified as belonging to the BROCKHURST 2 (711c) Soil Association, which are typical stagnogley soils (SSEW 1983a). These soils form over Permo-Triassic reddish mudstone and alluvium and are characterised as “Slowly permeable seasonally waterlogged reddish fine loamy over clayey soils. Some reddish clayey alluvial soils affected by groundwater” (SSEW 1983b, 16).

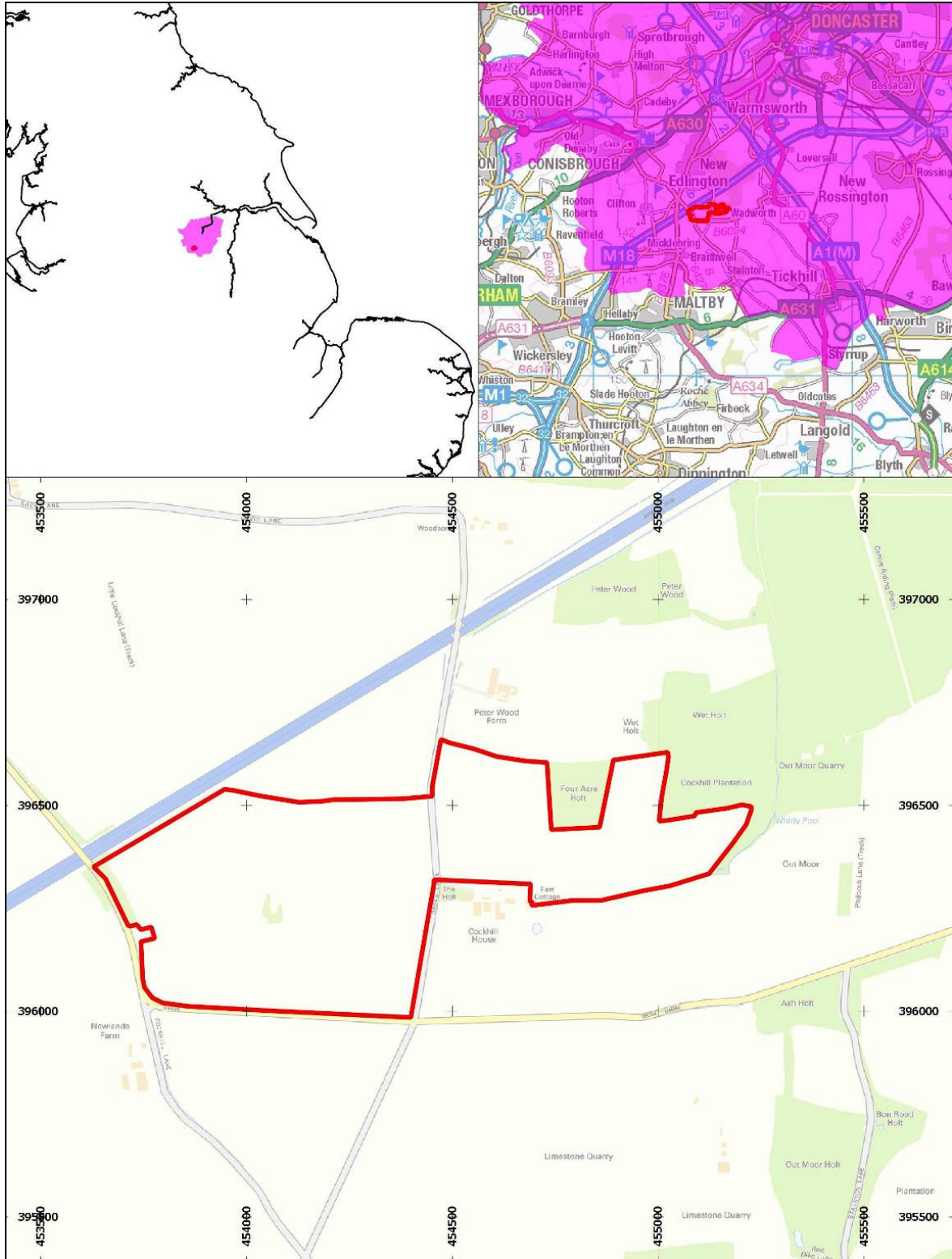
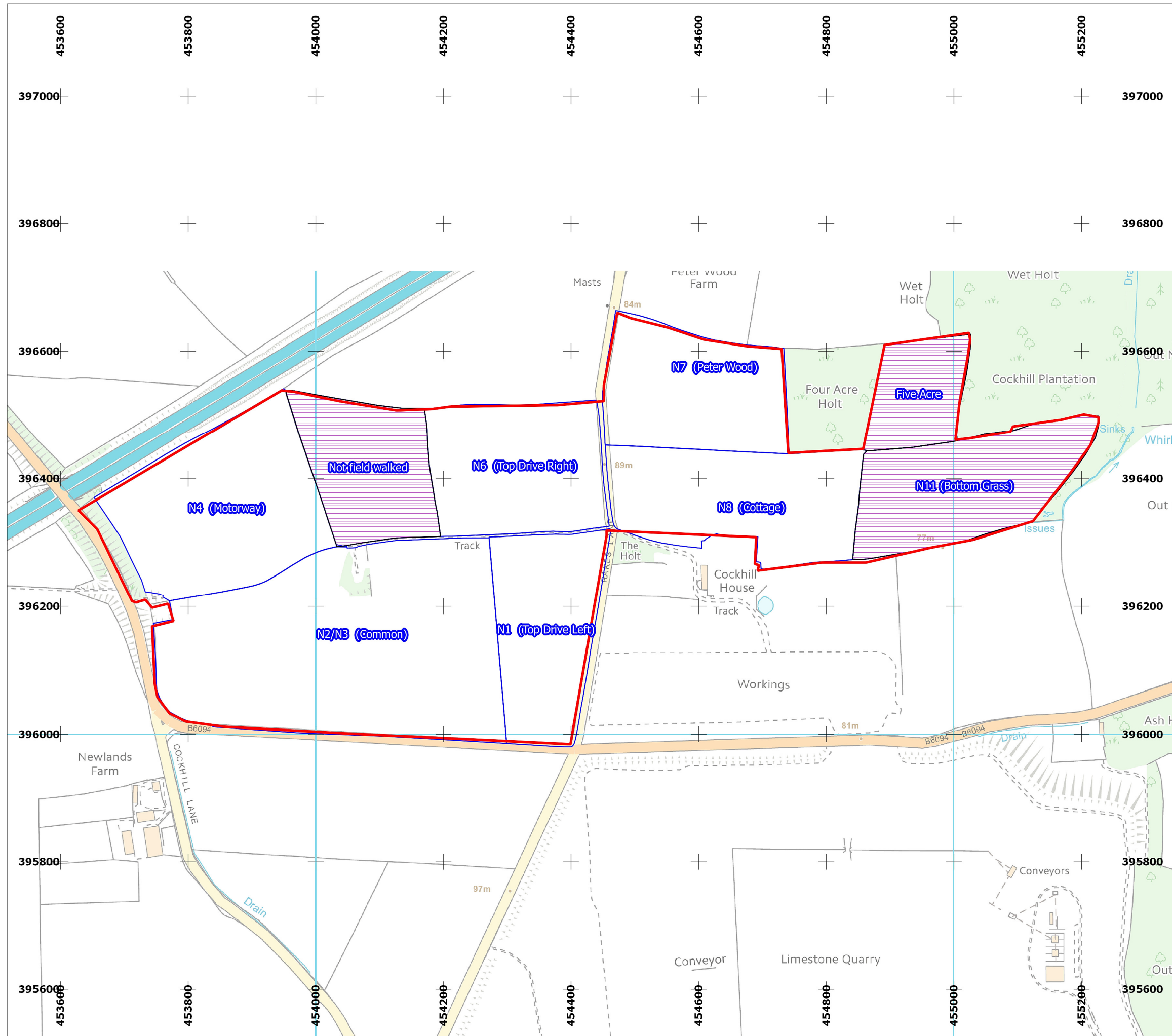


Figure 1: General site location (red boundary) within Doncaster District (purple).  
(Ordnance Survey Data © Crown copyright. All rights reserved. Licence No. 100045420)



**Figure 2:**  
**Plan of the site showing the surveyed fields with the codes and names**

- Field codes and names
- Fields not walked



Site name: Holme Hall Quarry  
 Date: April 2015  
 Drawn by: AB  
 Scale: 1:4000 @A3

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## **2 OBJECTIVES**

2.1 The purpose of the archaeological fieldwalking survey was to test the ploughsoil for the presence of ancient artefacts and to identify any areas of activity within the study area that could host buried archaeological remains. It would also ensure this work was undertaken to modern standards and could be used in conjunction with the geophysical survey, aerial photographic evidence and the DBA to inform any subsequent evaluation and/or mitigation.

## **3 METHODOLOGY**

3.1 The archaeological fieldwalking survey was undertaken within six arable fields which were walked once the land was ploughed and in some cases after being sown. As far as possible time was allowed for the surface to weather, to improve visibility of artefactual material lying on the surface. Records of the surface conditions at the time of the walking were kept.

3.2 The survey was undertaken at close-spaced intervals of 2m transects which provides a *c.*100% surface coverage assuming each person observes the ground 1m either side of their transect and that the field in question is walked when there is bare soil or limited sprouting crop. The fields were line-walked at 2m intervals in straight lines following a series of surveyed parallel baselines set across the fields (e.g. Passmore and Waddington 2009, 76 and 77).

3.3 Every find spot was point-referenced with a total station and the field boundaries surveyed so that field plots could be related to the Ordnance Survey grid.

3.4 Each find was marked by a cane inserted into the ground and the find inserted into a plastic bag for ease of cataloguing and identification.

3.5 Each field was mapped according to slope unit (morphometric mapping) so that each find spot could be ascribed to the type of slope on which it was found. The slope unit categories was based on those devised for fieldwalking projects elsewhere in England (Waddington 1999, 45-6), which were abstracted from standard slope types identified by Butzer (1982, 58).

3.6 General topography was recorded as this has important implications for the interpretation of surface artefact distributions as geomorphic processes operating on different slope units may affect artefact distribution and retrieval in different ways (Waddington 1999, 85-91). These processes were taken into account before meaningful inferences were made.

3.7 A catalogue of all finds was produced noting type, date, measurements and material *etc.* for the various finds. This detailed catalogue is incorporated with the project archive although a relevant register has been tabulated by fields and is included within the results. The lithic artefacts were subject to more rigorous recording as lithic scatters may be the only surviving evidence for prehistoric occupation.

3.8 All aspects of the archaeological fieldwalking survey followed the Chartered Institute for Archaeologists' *Code of Conduct* (CIfA 2014a) and the *Standard and guidance: Archaeological field evaluation* (CIfA 2014b).

3.9 A risk assessment was undertaken before commencement of the work and health and safety regulations were adhered to at all times.

## **4 HISTORICAL BACKGROUND**

4.1 The historical background of Holme Hall Quarry and its environs has been considered in a recent desk-based assessment (Brown 2014). The assessment concluded that there is high potential for archaeological remains dating to the Iron Age and/or Romano-British periods to survive within the survey area. The potential for previously unknown remains from other periods to survive within the survey area should not be discounted.

4.2 Indeed, the fieldwalking survey undertaken in 1993/4 as part of the original evaluation of the Cockhill Area recorded many worked flints which are likely to be of Neolithic or Early Bronze Age date, and whilst no concentrations thought to be indicative of sustained foci of activity were identified, it was noted that the greatest concentrations were identified along, or close to, the ridge followed by the track running west from Cockhill House Farm, possibly a former prehistoric routeway (Merrony 1994, 16).

## **5 RESULTS**

The archaeological fieldwalking survey was carried out in March 2015 by an experienced team of professional archaeologists. A total of six fields were rigorously surveyed for surface artefact collection and recording. The fields were walked directly after ploughing, or as the crop was just sprouting, to give the best visibility of the ground. Three additional fields were initially proposed to form part of the fieldwalking survey area although these were not ploughed and were left fallow. The results of the survey are presented field by field. The survey retrieved a total of 327 artefacts comprising 73 worked flints, 18 unworked flints, 115 sherds of pottery, 93 fragments of ceramic building materials (CBM) and 28 miscellaneous objects. Nine pieces of ironstones were also retrieved. This may constitute industrial waste as a small fraction of slag was also identified amongst the miscellaneous artefacts which may be associated with the ironstones. The lithic artefacts constitute significant finds as they often provide most of the evidence for Stone Age activity. Thus, a lithic analysis was undertaken by Alvaro Mora-Ottomano which is included in section 6 below. The ceramic and few miscellaneous artefacts were assessed by Dr Robin Holgate with type and date recorded. The results of these analyses were incorporated into scatter diagrams produced in a GIS which are included within the archaeological records (Appendix I: Figs 13 – 16). The artefactual character and date described below are thus based on the finds assessments. In order to better understand the character and nature of the archaeological occupation on site, the combined collected surface artefacts from a previous fieldwalking survey undertaken in 1993/4 and the results of the present survey have been tabulated together, although the results described in the following section relate to the current survey.

## **5.1 Field N1 (Top Drive Left)**

5.1.1 This is a small field to the west of Rakes Lane, with the north end of the field opposite the entrance to Cockhill House Farm. Field N1 is also called Top Drive Left which comprises approximately 4.7 hectares. It has a predominantly gentle slope to the south-east with an overall height of 90m above Ordnance Datum (AOD), becoming flatter near the northern end which forms a small ridge or gentle promontory at 94m AOD in the north-west. No significant slopes were present within the field. The south-eastern corner of the field had been a small quarry in the mid 19<sup>th</sup> century as indicated by cartographic records although it is currently backfilled with later deposits including soil that enables cultivation.

5.1.2 The entire field had been ploughed several weeks and had just been sown prior to the fieldwalking survey (Fig. 3). This had given the soil time to weather down and with overcast conditions and some dampness this gave ideal visibility.

5.1.3 The finds produced from this field totalled nine artefacts (Table 1) the majority of which were scattered within the northern area of the field. This is a relatively small assemblage which is unlikely to represent a genuine cluster of artefacts, however, it contains two diagnostic lithic artefacts which provides evidence for Stone Age occupation. These comprised a flint micro-scraper of early Mesolithic date and a notched flint flake of probable Neolithic date. Few pieces of flint were recovered during the previous fieldwalking survey in this field.

5.1.4 One sherd of Samian ware dating to the Romano-British period was also retrieved towards the northern boundary of the field which constitutes a find of local significance. The remaining artefacts consist of one sherd of pottery of 18/19<sup>th</sup> century date, three fragments of ceramic building material (CBM), predominantly roof tiles, and one piece of slag of indeterminate date and character.

5.1.5 Although the density of the artefacts is low it provides valuable evidence of past occupation within and/or in close vicinity of the site.



Figure 3: Field N1, looking south-west.

Survey	Type	Number of finds		Spot dating
1993/4	Worked flint	1		
	Unworked flint	5		
2015	Worked flint	2	1x micro-scraper 1x notch	1x early Mesolithic 1x Neolithic?
	Unworked flint	1		
	Pottery	2		1x Roman 1x 18/19 <sup>th</sup> c
	CBM	3		Post-med/modern
	Others (specify)	1	1x slag	

Table 1: Register of collected artefacts within field N1.

## 5.2 Field N2/N3 (Common)

5.2.1 This is the only amalgamated field, having previously been composed of two separate fields during the previous fieldwalking survey undertaken in 1993/4. This merged field consists of N2 and N3, and is also known as Common field, comprising approximately 14 hectares. The former N2 covered the eastern side of the merged field, and the central and western areas constituted the earlier N3. The current field rises to a central high point of approximately 97m AOD and contains a noticeable but relatively shallow dry valley in the west. No significant slopes were present within the field. The ploughing condition of the field was comparable to the adjacent field N1 to the east, providing therefore optimum visibility (Fig. 4).

5.2.2 The finds produced from this field totalled 35 artefacts (Table 2) composed of eleven worked lithics, thirteen sherds of pottery, eight fragments of CBM and three miscellaneous objects; whilst the preceding fieldwalking survey retrieved only two worked flint artefacts and eleven unworked flints. The majority of artefacts were found scattered within the eastern area of the field which formerly constituted field N2. The lithic component includes two scrapers of possible Mesolithic date, one notched piece which may fall into a Neolithic typology, one miscellaneous retouched piece and seven flakes/blades. The previous survey also identified an additional scraper amongst the flint artefacts.

5.2.3 This is a relatively small lithic assemblage, however it holds some significance and furthermore, may be associated with an interesting anomaly identified within the geophysical survey. This anomaly (C8), comprising two concentric rings with an overall diameter of 22 metres, is located towards the south-eastern area of N2/N3 (Durkin 2015) which is where the majority of the lithic scatter was found. This feature may be the remnants of a round barrow as from about 3500 BC (Neolithic period) the erection of these mounds was often accompanied by the digging-out of adjoining pits to form as many as three encircling ditches (Harding 2003, 17), although it may also be a D-shaped enclosure which often dates to later prehistoric periods.

5.2.4 The ceramic artefacts include three sherds of late medieval date which, due to their abraded and rolled condition, may be regarded as residual, probably as a result of manuring. The remaining pieces are also considered to be introduced and date to the 18/19<sup>th</sup> century, likewise the CBM which include several fragments of pantiles that may have originated from discarded demolition material of former buildings. One intriguing piece of worked quartz was retrieved which appears to have been attached to clothing or other garment. This has not been dated but it is likely that it constitutes a post-medieval decorative brooch-like object.

5.2.5 The overall assemblage contains a possible concentration of lithic material, including a few tools, within the eastern side of the field. Although the majority of the lithics are of indeterminate date, most can be assigned to the Neolithic-Bronze Age on the basis of morphological attributes. Two tools, however, are of possible Mesolithic date and there is a further tool which is likely to be Neolithic. The remaining artefacts and their distribution bears little significance although they also appear to be mainly within the eastern side of the field. It is worth noting that no artefacts were found within or in the vicinity of the cropmarks of a putative Iron Age or Romano-British enclosure (reference AR15) which had been identified by the Magnesian Limestone National Mapping Project (Brown 2014, 6). This possible enclosure is located towards the north-western area of the merged field and is visible as a cropmark on air photographs. The cropmark was also identified within the geophysical survey as anomaly C4/C5 (Durkin 2015).



Figure 4: Field N2/N3, looking west.

Survey	Type	Number of finds	Spot dating
1993/4	Worked flint	2 1x scraper 1x flake	
	Unworked flint	11	
2015	Worked flint	11 2x scrapers 1x notch 1x miscellaneous retouch 7x flake/blade	2x Mesolithic? 1x Neolithic? 8x late prehistory
	Unworked flint	0	
	Pottery	13	3x late medieval 9x 18/19 <sup>th</sup> c 1x 19 <sup>th</sup> c
	CBM	8	Post-med/modern
	Others (specify)	3 1x glass 1x iron 1x quartz clothing decoration	Post-med/modern

Table 2: Register of collected artefacts within field N2/N3.

### **5.3 Field N4 (Motorway)**

5.3.1 This is a large field which is also known as Motorway as it is situated to the south of the M18. The field comprises approximately 7.8 hectares and is fairly level, except for the north-western corner which slopes gradually down to the north-west. The high point of the field is approximately 98m AOD in the north-west and along a central ridge; and the low point is approximately 95m AOD in the north-east corner. No significant slopes were present within the field. This field is on a more north-east/south-west alignment than the other fields in the survey area.

5.3.2 The field had been ploughed several weeks prior to the survey and had just been sown. This had given the soil time to weather down and with overcast conditions and some dampness this provided ideal visibility (Fig. 5).

5.3.3 The finds produced from this field totalled 70 artefacts (Table 3) comprising eighteen worked lithics, eight unworked flints, twenty sherds of pottery, nineteen fragments of CBM and five miscellaneous objects. The preceding fieldwalking survey retrieved nineteen worked flints, seventeen unworked flints and one sherd of pottery. The majority of artefacts retrieved from the present fieldwalking survey were found scattered throughout the entire field without any discernible pattern although the distribution may possess some significance as the adjacent area to the south within field N2/N3 was virtually devoid of any artefacts.

5.3.4 The lithic component includes one scraper of possible Mesolithic date. The Neolithic period appears to be represented by an oblique arrowhead and a fabricator. There is also one notched piece which may fall into a Neolithic typology. The lithic assemblage also consists of three miscellaneous retouched flint artefacts and twelve additional flakes/blades which may date to the Neolithic-Bronze Age on the basis of general morphology. The previous survey also identified two additional scrapers and one core amongst the flint artefacts.

5.3.5 The ceramic artefacts include six sherds of late medieval date, most of them found towards the northern boundary of the field. The remaining pieces are probably residual dating to the 18/19<sup>th</sup> century, likewise the CBM which includes several fragments of pantiles that may have originated from discarded demolition material of former buildings. Miscellaneous artefacts include one piece of glass, three iron agricultural objects and one piece of slag of indeterminate date and character.

5.3.6 Overall the assemblage contains a wide scatter of flint artefacts, including some datable tools which appear to fall mainly within the Neolithic period. The remaining lithics are of indeterminate date, although they can be assigned to the Neolithic-Bronze Age on the basis of their overall morphology. This provides significant evidence for prehistoric occupation within the site and its environs.

5.3.7 The remaining artefactual material and its distribution bears little significance although the late medieval pottery, appears to be mainly situated towards the northern boundary of the field. The frequency of this late medieval material is very low whereas post-medieval pottery and CBM is more widely represented. Of note is the presence of one Romano-British sherd of pottery identified during the previous fieldwalking survey.



Figure 5: Field N4, looking west.

Survey	Type	Number of finds		Spot dating
1993/4	Worked flint	19	2x scraper 2x core 15x flake/blade	
	Unworked flint	17		
	Pottery	1		Roman
2015	Worked flint	18	1x scraper 1x fabricator 1 arrowhead 3x miscellaneous retouch 12x flake/bade	1x Mesolithic/Neolithic 1x Neolithic 1x Neolithic? 15x late prehistory
	Unworked flint	8		
	Pottery	20		6x late medieval 13x 18/19 <sup>th</sup> c 1x 19 <sup>th</sup> c
	CBM	19		Post-med/modern
	Others (specify)	5	1x glass 3x iron agricultural object 1x slag	4x modern

Table 3: Register of collected artefacts within field N4.



#### **5.4 Field N6 (Top Drive Right)**

5.4.1 This field lies immediately west of Rakes Lane and is also known as Top Drive Right which comprises approximately 9.6 hectares. In the centre of the field an area of approximately 1 hectare is under high crop that is used as game cover and this was unsuitable for the survey. The field falls from the west at 96m AOD to the east at 88m AOD with the slope increasing towards the east. No significant slopes were present within the field.

5.4.2 The field had been ploughed several weeks prior to the survey and had just been sown. This had given the soil time to weather down and with overcast conditions and some dampness this provided ideal visibility (Fig. 6).

5.4.3 The finds produced from this field totalled 44 artefacts (Table 4) comprising eighteen worked lithics, one unworked flint, fifteen sherds of pottery, eighteen fragments of CBM and two miscellaneous objects, whereas the preceding survey only retrieved one piece of unworked flint. The majority of artefacts retrieved from the present fieldwalking survey were found scattered without any discernible pattern although the distribution of the lithics was mostly along the northern boundary of the field, and the pottery within the eastern side of the field.

5.4.4 The lithic component includes one broken backed blade of possible Mesolithic date. The Neolithic period is represented by one leaf-shaped arrowhead. It also contains one awl/borer, one piercer and one miscellaneous retouched flint artefact which may date to the Neolithic-Bronze Age. Three additional flakes/blades were also present which could not be ascribed to a specific period.

5.4.5 The ceramic artefacts include one sherd of Romano-British Greyware pottery which was the only pottery on the west of the field. This piece was found relatively close to the sherd of Samian ware, dating to the Romano-British period, retrieved within field N1. Two additional sherds of pottery of late medieval date were found towards the northern side of the field. The remaining pieces are possibly introduced and date to the 18/19<sup>th</sup> century, and likewise the CBM which includes several fragments of pantiles that may have originated from discarded demolition material of former buildings.

5.4.6 Miscellaneous artefacts include one piece of glass and one iron object, the latter of which appears to be from a modern plough.

5.4.7 The overall assemblage contains a possible concentration of lithic material, including a number of tools, towards the northern boundary of the field. Although the majority of the lithics are of indeterminate date, some can be assigned to the Neolithic-Bronze Age on the basis of their overall morphology. One diagnostic tool is possibly of Mesolithic date. A single piece of Romano-British pottery may also constitute a find of local significance. The remaining artefacts and their distribution bears little significance although the pottery is mainly within the eastern side of the field.



Figure 6: Field N6, looking west.

Survey	Type	Number of finds		Spot dating
1993/4	Worked flint	0		
	Unworked flint	1		
2015	Worked flint	8	1x backed blade 1x awl/borer 1x piercer 1x arrowhead 1x miscellaneous retouch 3x flake/blade	1x Mesolithic? 1x Early Neolithic 2x Late Neolithic/Bronze Age 4x late prehistory
	Unworked flint	1		
	Pottery	15		1x Roman 2x late medieval 1x post-medieval 9x 18/19 <sup>th</sup> c 2x 19/20 <sup>th</sup> c
	CBM	18		Post-med/modern
	Others (specify)	2	1x glass 1x iron plough?	1x modern

Table 4: Register of collected artefacts within field N6.

## **5.5 Field N7 (Peter Wood)**

5.5.1 This field is also known as Peter Wood and is located immediately to the east of Rakes Lane and to the north of Cottage comprising approximately 5.0 hectares. The field slopes gently from north to south and west to east from a high point of 89m AOD in the north-west to 81m AOD in the north-east. No significant slopes were present within the field. The field had been ploughed for several weeks and was surveyed as the crop was just sprouting to give the best visibility of the ground (Fig. 7).

5.5.2 The finds produced from this field totalled 32 artefacts (Table 5) which comprised six worked lithics, one unworked flint, seven sherds of pottery, fifteen fragments of CBM and three miscellaneous objects, whereas the preceding survey only retrieved one piece of pottery. The most significant artefacts were found scattered throughout the entire field without any discernible pattern, although the distribution of the flint artefacts may be closely associated with an extensive cluster identified within the adjacent field N8 to the south.

5.5.3 The lithic component consists of flakes/blades of indeterminate date, although they can be assigned to the Neolithic-Bronze Age on the basis of their overall morphological attributes.

5.5.4 The ceramic artefacts include one sherd of Romano-British Greyware pottery which may be associated with a group located near the boundary of field N8 to the south and also with an equivalent type of pottery retrieved during the previous fieldwalking survey. Six additional sherds of pottery of 18/19<sup>th</sup> century date were also retrieved which appears to be introduced material, and likewise the CBM which includes several fragments of pantiles that may have originated from discarded demolition material of former buildings.

5.5.5 Miscellaneous artefacts include one piece of slag of indeterminate date and two bone fragments.

5.5.6 This is a relatively small assemblage which is unlikely to represent a genuine cluster of artefacts, however it contains lithic artefacts which provide evidence for late prehistoric occupation, as well as one sherd of Romano-British pottery. These two groups of artefacts are significant and both appear to be associated with larger assemblages within the adjacent field N8 to the south.



Figure 7: Field N7, looking west.

Survey	Type	Number of finds		Spot dating
1993/4	Pottery	1		Roman
2015	Worked flint	6	5x flake/blade 1x core	6x late prehistory
	Unworked flint	1		
	Pottery	7		1x Roman 6x 18/19 <sup>th</sup> c
	CBM	15		Post-med/modern
	Others (specify)	3	2x bone 1x slag	2x post-med/modern

Table 5: Register of collected artefacts within field N7.

## **5.6 Field N8 (Cottage)**

5.6.1 This field, also known as Cottage, is located immediately north of the derelict farm buildings and comprises approximately 5.8 hectares. The field slopes gradually from a high point of 89m AOD in the west to 81m AOD in the east. The field had been ploughed several weeks prior to the survey and was surveyed as the crop was just sprouting so as to give the best visibility of the ground (Fig. 8) although a small area to the north-eastern corner of the field was not surveyed as it was partially covered by standing water.

5.6.2 The finds produced from this field totalled 136 artefacts (Table 6) comprising twenty eight worked lithics, seven unworked flints, fifty seven sherds of pottery, thirty fragments of CBM and fourteen miscellaneous objects. The preceding survey retrieved a much lower number of artefacts comprising five worked flints, two unworked flints and four sherds of pottery. The majority of artefacts retrieved from the present fieldwalking survey were found scattered throughout the entire field although with fewer artefacts within the western side of the field.

5.6.3 The lithic component includes two-micro scrapers of Mesolithic date. Further Mesolithic material may be represented by two additional end scrapers although one of these could also be of potential Neolithic date. The Neolithic period appears to be represented by one saw and one knife. One notched piece, two awls/borers, three miscellaneous retouched artefacts and sixteen flakes/blades (of indeterminate date) were also retrieved. These may be broadly assigned to the Neolithic-Bronze Age. The previous survey also identified two cores amongst the flint artefacts. This provides significant evidence for prehistoric occupation within this locale and the range of tools, even in this small assemblage, hints at settlement activity.

5.6.4 The ceramic artefacts include eighteen sherds of Romano-British pottery as well as four possible sherds of Romano-British pottery. Four additional pieces of pottery of late medieval date were also collected from the northern area of this field. The remaining pieces may be introduced and date to the 18/19<sup>th</sup> century, and likewise the CBM which includes several fragments of pantiles that may have originated from discarded demolition material of former buildings. Miscellaneous artefacts include one piece of clay pipe, eight fragments of glass, three iron agricultural objects and two pieces of slag. These were found throughout the entire field and such density is consistent with intensive post-medieval farming; most likely the process of manuring which involved spreading items such as broken clay pipe and pottery, along with animal waste, to aid drainage and fertilise the ground.

5.6.5 The overall assemblage contains a wide scatter of flint artefacts, including some datable tools which appear to fall mainly within the Mesolithic and Neolithic periods. The remaining lithics are of indeterminate date, although they are most likely to fall within the Neolithic-Bronze Age on the basis of their overall morphology. This provides significant evidence for prehistoric activity within this locale and its environs.

5.6.6 The Romano-British pottery assemblage also bears significance due to its relatively high frequency and clustered distribution. Moreover, the general location of this assemblage is within and around a possible enclosure identified within the geophysical survey as anomaly CT1 which might have originally consisted of a square or rectangular shape with an overall dimension of approximately 40 metres in length, although it is now partially truncated (Durkin 2015; and see Figs 13 – 16).

5.6.7 Approximately 1 km south of this anomaly, one of the richest Iron Age-Romano-British rural sites in South Yorkshire was found (O'Neill and Raybould 2007, 103-4) as a result of the identification of a concentration of nine Greyware sherds recovered during the fieldwalking survey in 1993/4 (Merrony 1994), which led to a subsequent geophysical survey and an open area excavation. Thus, the clustered Romano-British pottery identified during the current fieldwalking survey, which appears to be situated within a surviving enclosure, despite systematic ploughing, highlights this potential site as an area of significance within the mineral extraction area.

5.6.8 It is also worth noting that a large majority of slag fragments as well as ironstones collected during the survey, were mainly distributed within this field and in close proximity to the cluster of Romano-British pottery, suggesting the presence of metalworking debris associated with what appears to be an Iron Age - Romano-British enclosure.



Figure 8: Field N8, looking south.

Survey	Type	Number of finds		Spot dating
1993/4	Worked flint	5	2x core 3x flake/blade	
	Unworked flint	2		
	Pottery	4		Roman
2015	Worked flint	28	2x micro-scraper 2x scraper 1x knife 1x notch 1x saw 2x awl/borer 3x miscellaneous retouch 16x flake/blade	1x early Mesolithic 1x Mesolithic? 1x late Mesolithic/Early Neolithic 1x Neolithic 1x Neolithic? 3x Neolithic/Br. Age 20x late prehistory
	Unworked flint	7		
	Pottery	57		18x Roman 4x Roman? 4x late medieval 1x post medieval 30x 18/19 <sup>th</sup> c
	CBM	30		Post-med/modern
	Others (specify)	14	1x clay pipe 8x glass, 2x slag 3x iron object	12x post med/modern

Table 6: Register of collected artefacts within field N8.

## **6 LITHIC ANALYSIS**

### **6.1 Introduction**

6.1.1 Fieldwalking survey has a longstanding pedigree, especially for locating sites and, particularly, in establishing the presence of sites that have been entirely truncated by the plough (e.g. Hey and Lacey 2001, 56-60; Bond 2011, 29-41). This is particularly so for Stone Age sites that might have originally consisted of ephemeral features but which leave a trace in the form of durable stone tools. Given that lithic scatters may be the only surviving evidence for prehistoric activity. Thus a lithic analysis of the material retrieved from the fieldwalking survey at Holme Hall Quarry has been undertaken.

### **6.2 Aims**

6.2.1 This study attempts to establish the *chaîne opératoire* (operational sequences), concept first formulated by Leroi-Gourhan (1943). This approach examines the different stages of lithic exploitation. The sequence begins with the acquisition of raw material, followed by the reduction of nodules and cores, the removal of blanks from cores, and the manufacture and use of tools and finally, the discard of the artefacts (Bar-Yosef *et al.* 1992). An addition to these sequences is the post-depositional disturbance of the site and even the archaeological recovery strategy, as these will have an effect on our understanding of the *chaîne opératoire*. This lithic analysis hopes to characterise the type/s of site, and to determine the lithic techno-complexes, functionality and chronology.

### **6.3 Method**

6.3.1 The worked stone recovered by this fieldwalking survey were subject to metrical and attribute analysis. A range of attributes was recorded following standard systems (e.g. Inizan, Roche and Tixier 1992) to explore knapping technology. These relate to the characteristics of technological category, tool type, portion, reduction sequence, raw material, colour, condition and type of butt. The assemblage was examined under a x10 magnification hand lens. This proved to be essential to identify general knapping attributes and even additional retouch as the majority of the pieces were considerably patinated and marginally abraded hampering their analysis. Indeed, general knapping characteristics such as bulb of percussion, ripples, scar orientation and so forth were not detectable even through magnification, however, related attributes such as dorsal erailure scars and lances were often discerned through the lens. Metrical data was recorded for most artefacts except unworked lithics. Dimensions were measured in millimetres, and were divided into L (length): the distance between the proximal and distal ends; W (width): the maximum distance between the two sides of the artefact measured perpendicular to the length; and T (thickness): the maximum thickness of the artefact perpendicular to the length. The comments category was used to record various attributes such as thermal alteration, post-depositional breakage, retouch, wear, scar direction, type of bulb, and blank termination failures (i.e. non-feather termination). A catalogue is provided in Appendix I and the entire record is included the project archive.



## **6.4 Lithic assemblage**

6.4.1 The assemblage contains a number of diagnostic dateable lithic artefacts which exhibit manufacture characteristics associated with Mesolithic, Neolithic and Bronze Age dates. Because the lithics were found scattered within the topsoil layer, it is assumed that they represent only a portion of some prehistoric activities. Post-depositional movement (e.g. through ploughing and surface run-off) may have had an effect on their wider redistribution.

6.4.2 The lithic assemblage consists of 73 worked pieces and 18 unworked flint chunks/lumps. The chunks are pieces of grey to dark grey non-cortical flint which have been severely damaged after primary post-deposition/discard. Subsequent to the damage produced, the pieces have lost apparent knapping attributes to establish a genuine anthropogenic origin thus the chunks are not included in the following analysis. Nevertheless, they may have previously been worked lithics such as cores, core-tools or large flakes brought to the site as this raw material does not occur naturally in this area.

6.4.3 The worked stones are divided into 29 tools (39.7%), 4 blades (5.5%), 4 bladelet (5.5%), 30 flakes (41.1%), 1 core (1.3%), 3 chunky flakes (4.1%) and 2 spalls (2.7%) (Tables 7 – 10). No micro-debitage was found. The entirety of the worked stone recovered from the site consists of flint. The artefacts were plotted on scaled plans showing their location and broad date (Appendix I).

6.4.4 The assemblage is generally in moderate condition, although there are clear signs of patination, weathering and slight abrasion. This suggests that the lithic implements might not have moved very far horizontally from their original position, and thus confirms the existence of prehistoric occupation in this locale. The assemblage includes only 25 whole pieces (including tools). The rest of them are broken and comprise 8 distal ends, 15 proximal ends and 25 medial portions. These frequencies may suggest that approximately 75% of the artefacts was discarded after breakage or suffered post-depositional damage – most likely from ploughing. Dorsal coverage of cortex is found amongst 29 pieces, which relates mainly to the secondary stage of the reduction sequence. Artefacts belonging to the tertiary stage of the reduction sequence predominate. These frequencies indicate that most of the roughing out of flint nodules took place elsewhere and that processing activities took place in this locale – a characteristic most often related to settlement-related activities.

	Number of finds	Spot dating	Total 73
<b>Arrowhead</b>	1 1	Neolithic? Early Neolithic	2
<b>Awl/borer</b>	1 2	Neolithic/Bronze Age Neolithic?	3
<b>Piercer</b>	1	Later prehistory (indeterminate)	1
<b>Scraper</b>	3 4 1	early Mesolithic Mesolithic? Mesolithic/Neolithic	8
<b>Backed blade</b>	1	Mesolithic?	1
<b>Knife</b>	1	Late Mesolithic/early Neolithic	1
<b>Fabricator</b>	1	Neolithic	1
<b>Notch</b>	3	Neolithic?	3
<b>Saw</b>	1	Neolithic	1
<b>Miscellaneous retouched</b>	8	Later prehistory (indeterminate)	8
<b>Blade</b>	4	Later prehistory (indeterminate)	4
<b>Bladelet</b>	4	Later prehistory (indeterminate)	4
<b>Flake</b>	30	Later prehistory (indeterminate)	39
<b>Core</b>	1	Later prehistory (indeterminate)	1
<b>Chunk/spall</b>	5	Later prehistory (indeterminate)	5

Table 7: Summary of lithics.

	Tool	Blade	Bladelet	Flake	Core	Chunk/Spall	Total
<b>Primary</b>	2			4			6
<b>Secondary</b>	10	1	2	7		3	23
<b>Tertiary</b>	17	3	2	19	1	2	44
<b>Total</b>	29	4	4	30	1	5	73

Table 8: Reduction sequence.

	Tool	Blade	Bladelet	Flake	Core	Chunk/Spall	Total
<b>Proximal</b>	4	1	1	9			15
<b>Medial</b>	12		3	7		4	25
<b>Distal</b>	5	1		2			8
<b>Whole</b>	8	2		13	1	1	25
<b>Total</b>	29	4	4	30	1	5	73

Table 9: Portion of artefacts.

	Tool	Blade	Bladelet	Flake	Core	Chunk/Spall	Total
<b>Cortical</b>	2			3			5
<b>Plain/Flat</b>	5	2		10		1	18
<b>Facetted</b>	1	1		2			4
<b>Dihedral</b>				1			1
<b>Punctiform</b>	1		1	2			4
<b>Winged</b>	3			3			6
<b>Total</b>	12	3	1			1	38

Table 10: Type of butt (when present).

#### *Arrowhead*

6.4.5 Artefact SF 329 is a late Neolithic oblique arrowhead with thin to semi-abrupt bifacial lateral retouch and hollow base forming a deliberate single barb. Artefact 394 is a leaf-shaped arrowhead type 4B after Green's (1980) typology, made with variable retouch including a thin and bifacially invasive form (Fig. 9). This type of arrowhead falls into the early Neolithic period.

#### *Awl/Borer*

6.4.6 Three awls/borers were identified made from long hard hammer-struck flakes which were intended for use in the hand to pierce soft materials rotating the tools through 360°. Artefact SF 69 has thin dorsal retouch creating a converging tip. It has been curated as it also has a secondary thin retouched converging tip. Artefact SF 440 has a thin retouched dorsal converging tip, and has also been curated with secondary thin retouch creating a straight edge that was executed following subsequent to damage. Artefact SF 247 has been created with slightly crude semi-abrupt dorsal retouch creating a converging tip. It is rather worn and possesses additional thin retouch along a single lateral edge close to the butt.

#### *Piercer*

6.4.7 Artefact SF 386 is a piercer made from a flake which has convergent thin dorsal retouch showing wear traces of having been used in a twisting motion backwards and forwards to create a hole in tough materials.

#### *Scrapers*

6.4.8 Eight scrapers have been identified (SF nos. 410, 412, 347, 140, 261, 408, 192 and 122). Scrapers were probably used for working soft material such as hide, but may also have been used for woodworking (Butler 2005, 49). Artefacts SF 122, SF 192 and SF 408 are micro-scrapers manufactured on small short flakes, and have a semi-retouched convex distal end with the retouch being slightly irregular and/or intermittent along the lateral edges (Fig. 11). These types of scraper are sometimes referred to as thumbnail scrapers. Originally thumbnail scrapers were thought to be early Bronze Age, but these small scrapers, particularly those with abrupt retouch are common in well-stratified Mesolithic contexts (Butler 2005, 105). Indeed, this type differs from the Bronze Age tools as they tend to be less well made and not as rounded as the Bronze Age types on which the retouch frequently extends around the entire circumference.

6.4.9 Artefacts SF 410 is a double-sided end scraper with generally semi-abrupt although slightly irregular retouch. Artefacts SF 412, SF 347 and SF 261 are end scrapers with semi abrupt retouch and a slight convex-shaped edge (Fig. 12). These types of end scrapers may date to the Mesolithic period (*ibid.*). Finally SF 140 could be regarded as a semi-keeled convex end scraper with very abrupt parallel retouch, which has also been curated. This end scraper bears a high resemblance with other specimens found in several Mesolithic assemblages (e.g. Mithen 1999, 39-40; Radley and Mellars 1964, 1-24; Wymer 1977). It appears that all the scrapers have distinct Mesolithic characteristics although some of them may date to the early Neolithic period.

#### *Backed blade*

6.4.10 Artefact SF 388 is a broken backed blade with a trapezoidal cross section, abrupt retouch along a single edge creating the backed or blunt edge and has a rather narrow width measuring 13mm. It is difficult to date this artefact due to its fragmented state, however it is

reasonable to suggest that the specimen may fall into the leptolithic category representative of the later Upper Palaeolithic industries of the continent (Magdalenian and Azilian), and the Mesolithic techno-complexes in general (Laplace 1966) or more specifically the 'broad blade assemblage' of the early Mesolithic such as the Maglemosian industry (Adkins and Adkins 1999, 21; Mithen 1999, 38).

#### *Knife*

6.4.11 Artefact SF 106 is a distal portion of a flake with a hinge terminal with partial dorsal invasive retouch becoming semi-abrupt toward the distal end left lateral side with opposite edge wear traces. It may be a fragment of a plano-convex knife and, if so, would typically date to the Beaker period (Butler 2005, 170).

#### *Fabricator*

6.4.12 Artefact SF 292 appears to be a fabricator made from a triangular cross-sectioned slightly rod-shaped blade. It has a rounded end/tip that is abraded and worn from use (Fig. 10). This type of artefact is often found amongst Neolithic assemblages although they can also occur in Mesolithic assemblages.

#### *Notched pieces*

6.4.13 Artefacts SF 164, SF 405 and SF 409 are notched pieces on large flakes. The notches were executed employing abrupt or semi abrupt removals, rather than creating them using Quina or Clactonian methods (Inizan, Roche and Tixier 1992) or created accidentally by the plough which can sometimes create similar features (Butler 2005, 34). Notches are found in all periods of prehistory but these are more likely to be of Neolithic – Bronze Age date.

#### *Saw*

6.4.14 Artefact SF 49 is a saw or serrated flake which is characteristic of the Neolithic period. The saw is made from a large flake with almost entirely ventral retouch to create a serrated edge (Fig. 10).

#### *Miscellaneous retouched*

6.4.15 Eight further retouched artefacts have also been identified. This classification corresponds to the debitage, which shows signs of having been deliberately retouched by percussion or pressure flaking along one or more edges, but no specific purpose can be defined from the nature of the retouch. The retouched artefacts are made on flakes and most of them have thin retouch. It is likely that these pieces were utilised for cutting, scraping and similar activities and were manufactured for immediate tasks without the need for working the edges in a meticulous manner. Although of indeterminate age, these artefacts are considered likely to belong to the Neolithic – Bronze Age.

#### *Utilised waste*

6.4.16 Flint is an ideal stone for cutting or similar activities without any further retouch to the sharp edges created by knapping, and it is estimated that at least three blanks were used or damaged by utilisation. This includes a whole blade (SF 201) with wear traces along the entire left edge, a distal portion of a blade (SF 33), and four flakes (SF 162, 254, 279, 337

and 416). This utilisation is indicated by a series of small irregular spalls which have flecked off the edges of the flakes/blades. Although the majority of the assemblage is in moderate condition, some of the edge wear could have been the result of accidents, e.g. a flake being stood on. However, the wear produced by the utilisation of these artefacts is more consistent than the irregular unsystematic removal of a number of spalls resulting from accidents.

#### *Debitage*

6.4.17 The rest of the assemblage consists of 30 flakes, 4 blades, 4 bladelets, 3 chunky flakes and 2 spalls. These pieces generally correspond to irregular waste, which is not closely datable. Consequently, most of this element has been assigned to two broad chronological groups, late Mesolithic to early Neolithic and late Neolithic to Bronze Age on the basis of their overall morphology.

6.4.18 Amongst the flakes, there are 13 pieces which are whole portions yielding a mean length of 23.9mm. The overall width of the complete flakes yielded a mean of 17mm. These broad flakes are characteristic of Neolithic – Bronze Age forms. Two blades (SF 1 and SF 201) are whole specimens which provide a mean of 39mm in length and 22mm in width which corroborates this observation. There are four bladelets (SF nos 184, 298, 299 and 327) which have been produced employing careful skilful techniques some of which contain parallel edges and/or ridges, triangular cross-section and the only proximal portion holds a prepared punctiform butt. These artefacts may fall into the leptolithic category representative of Mesolithic manufacturing traditions (Laplace 1966).

6.4.19 The majority of the flakes correspond to general trimming with few pieces including ridge presence. Their size is unsuitable for large tools. The majority were probably produced as by-products of flake and blade production or during core preparation, and thus they can be considered as waste. Most flakes show that they have been struck from cores worked in a single direction. Butt preparation (Table 10) is not frequently represented. A small proportion of removal of overhang by abrasion, diffuse bulb of percussion and lipped butts indicate that the production of the artefacts is entirely in keeping with the Mesolithic lithic knapping techniques. However, other attributes previously mentioned indicate characteristics of Neolithic and possibly even early Bronze Age traditions.



Figure 9: Leaf-shaped arrowhead SF 394 (right) and oblique arrowhead SF 329 (left).



Figure 10: Fabricator SF 410 (right) and saw SF 254 (left).



Figure 11: Micro-scrapers SF 299 (right) and SF 105 (left).



Figure 12: End scrapers SF 188 (right) and SF 440 (left).

## **6.5 Raw material**

6.5.1 All the lithic artefacts were manufactured from flint whose quality and colour varied slightly across the assemblage. This was of moderate to good quality and light mottled grey to grey colour seems to predominate. The mottled grey flint, as well as the fewer black pieces, may originate from the chalk lands of Lincolnshire (Barfield 2002, 3; Pierpoint 1981) and/or the Yorkshire Wolds (Pierpoint 1981). Dorsal coverage of cortex is found amongst 29 pieces, which relates mainly to the secondary stage in the reduction sequence. The cortex was mainly orangey and relatively thin in section. It had a solid matrix, which was often pitted and abraded and larger areas tended to have a rounded profile. These attributes indicate the raw materials were water-worn pebbles and cobbles derived from river terrace gravels or glacio-fluvial sheet deposits. The precise location of the source(s) has not been identified but may lie in the gravels of Doncaster and/or Humberside (Gaunt and Girling 1996, 191; McEvoy *et al.* 2005). The use of flint pebbles for prehistoric artefact production would have determined the dimensions of the cores and subsequently the knapped blanks.

6.5.2 The provenancing of the lithic artefacts' raw material sheds light on the movement of raw materials. However, it is not suggested here that the people who occupied the site concerned would have necessarily extracted the natural stones from their source of origin. Indeed, available drift deposits may have provided the required nodular pieces, and curation of the lithics may have occurred through time. On the whole, the range of materials would be quite consistent with the flint being derived from the various till deposits of eastern Yorkshire (Brooks 2001) although in some cases the degree of patination makes it impossible to identify its original nature.

## **6.6 Knapping technology**

6.6.1 The majority of the flakes/blades were removed by direct percussion. The butts are mainly plain, although a reasonable frequency of prepared butts indicates that the core platforms were meticulously prepared. However, there are flakes with morphological traits that are characteristic of Neolithic traditions and fewer flakes with broader butts, pronounced bulbs and minimal platform edge preparation, which are consistent with the less structured methods of core reduction commonly utilised during the late Neolithic and early Bronze Age.

6.6.2 Deliberate retouch was primarily achieved through direct percussion, although some implements were surely shaped by using the pressure flaking technique. Hard hammers seem to have been largely employed. A low frequency of lipped butts, vague point of percussion and diffuse bulbs predominates indicating that soft hammers were also utilised in a smaller number of artefacts. Scraper edges were achieved by low angle direct percussion probably using a hard hammer stone. The majority of the scar orientations correspond to the same axis as the striking platform which suggests that single platform cores would have been largely employed. There are also six pieces which would have been obtained from opposed and twenty from multiple platform cores.

6.6.3 The bladelets were produced employing indirect percussion which involves striking a punch-like object, often made of antler or wood, with a hammer. This technique requires a carefully prepared core with an even platform and regular ridges (Whittaker 1994: 33).



## 6.7 Discussion

6.7.1 Although post-depositional disturbance is evident in a number of artefacts, careful inspection of the assemblage suggests that the lithic artefacts have not moved very far horizontally from their original position. Because the lithics are scattered within the topsoil, with no apparent pattern discerned from the distribution plan, little can be understood in terms of distribution of specific tools, layout of archaeological features associated with the lithics, selectivity in the disposal of the debitage and so forth. However, there may be up to three areas of high density which may indicate evidence for settlements or other closely defined prehistoric activity. Indeed, a large concentration of lithics was identified within field N8 and the adjacent area of field N7 to the north. Two additional concentrations of lithics were noticed within fields N2/N3 and field N4. Indeed, this assemblage represents a potentially very small sample of what may be an extensive area of prehistoric activity. The assemblage contains evidence for small-scale production with a domestic content and other activities extending from the Mesolithic through to the Neolithic and possibly even the early Bronze Age.

6.7.2 The overall frequency of tools is relatively high in relation to the rest of the assemblage, containing reliable evidence for processing activities related to Mesolithic, Neolithic and perhaps Bronze Age activity. Most of the tools are scrapers which indicate that some specialised domestic crafts, such as engraving, cutting and so forth were carried out. The repairing and re-sharpening of artefacts may have also occurred as indicated by the characteristics of the flakes and chips. The presence of notches, awls/borers, one piercer, one saw and one knife also indicate a variety of domestic activities. Furthermore, two arrowheads were also identified which may provide evidence for hunting or similar activities. In addition to this, some of the general debitage shows signs of having been extensively utilised. These blanks might have been employed on several occasions for the execution of particular tasks. Only one exhausted core was identified within the assemblage. Furthermore, due to the low frequency of flakes from the primary phase of the reduction sequence, it is believed that the roughing-out of the cores took place elsewhere.

6.7.3 The information discussed in the preceding sections may indicate that some of the lithic artefacts are not closely datable, but a significant number of the artefacts have morphological traits that enable them to be assigned to more precise chronological periods. Detailed artefactual distribution plans, overlying the geophysical greyscale plot, exhibit the zones of possible prehistoric and Romano-British occupation. However, due to the limitations of diagnostic lithics within the assemblage, no apparent chronological patterning of the lithic scatter can be perceived. It is, therefore, apparent that the assemblage is a palimpsest comprising the residues of human activity extending from the Mesolithic through to the Neolithic and possibly even the early Bronze Age. This medium size assemblage for the region may suggest that there was occupation or sustained activity in the immediate environs of the site during this extended period. However, the nature and intensity of prehistoric activity is difficult to characterise, because the material collected are surface residues only revealed by ploughing. Thus, this assemblage represents only a small portion of the worked lithic material originally deposited across this site. The occupation might have only been sporadic, but some of the activities employed may be connected with domestic and specialised activities. The frequency of tool variability can be associated with domestic practices carried out in a settlement. The interpretation of such a limited collection is indeed difficult, but the date of at least some of the artefacts is in keeping with Mesolithic, Neolithic and possibly early Bronze Age activity on the site. Further fieldwork will provide greater insights into the prehistoric occupation at Holme Hall Quarry.

## **7 CONCLUSION**

7.1 The survey retrieved a total of 327 artefacts comprising 73 worked flints, 18 unworked flints, 115 sherds of pottery, 93 fragments of ceramic building materials (CBM) and 28 miscellaneous objects. Nine pieces of ironstones were also retrieved. There is a general medium to high frequency of modern and post-medieval material which appears to be introduced material. Indeed, these were found across all fields and such density is consistent with intensive post-medieval farming; most likely the process of manuring which involved spreading items such as broken clay pipe and pottery, along with animal waste, to aid drainage and fertilise the ground.

7.2 The medieval period is almost completely unrepresented in the material recovered although fifteen pieces of possible late medieval pottery were retrieved mainly from fields N8 and N4. It is possible that this material may also be introduced due to the fragmented and rather abraded condition of the sherds.

7.3 Iron Age - Romano-British pottery occurs in a low frequency although the majority of the sherds represent a distinct cluster within the northern area of field N8. This cluster is also located within and around what appears to be a ditched enclosure identified by the geophysical survey, and which may be regarded as a potential site of significance.

7.4 The Stone Age material recovered during the survey consists of flint artefacts. A total of 73 worked lithics were retrieved including 29 tools, 4 blades, 4 bladelet, 30 flakes, 1 core, 3 chunky flakes and 2 spalls. Although some of the lithic artefacts are not closely datable, a significant number of the artefacts have morphological traits that enable them to be assigned to a more precise chronological period. There may be up to three areas of high density which may indicate evidence for settlements or other closely-defined activity. Detailed artefactual distribution plans overlying the geophysical greyscale plot exhibit the zones of possible prehistoric and Romano-British occupation. However, due to the limitations of diagnostic lithics within the assemblage, no apparent chronological patterning of the lithic scatter within the zones aforementioned can be perceived. It is apparent that the assemblage is a palimpsest comprised of the residues of human activity extending from the Mesolithic through to the Neolithic and possibly even the early Bronze Age. The size of the assemblage may suggest that there was episodic occupation or sustained activity on areas of the site during this time span.

7.5 The archaeological fieldwalking survey produced an interesting assemblage suggesting potential remains of Stone Age, Iron Age and Romano-British occupation across the site. Further evaluation and/or mitigation work will provide greater insights into any such remains that survive below ground on the site.

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9.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

## **10 ARCHIVE DEPOSITION**

10.1 An archive will be prepared by ARS Ltd, consisting of all artefacts, primary written documents, plans, photographs and survey electronic data, which will be deposited in due course with Doncaster Museum under an accession number to be confirmed.

## **11 ACKNOWLEDGEMENTS**

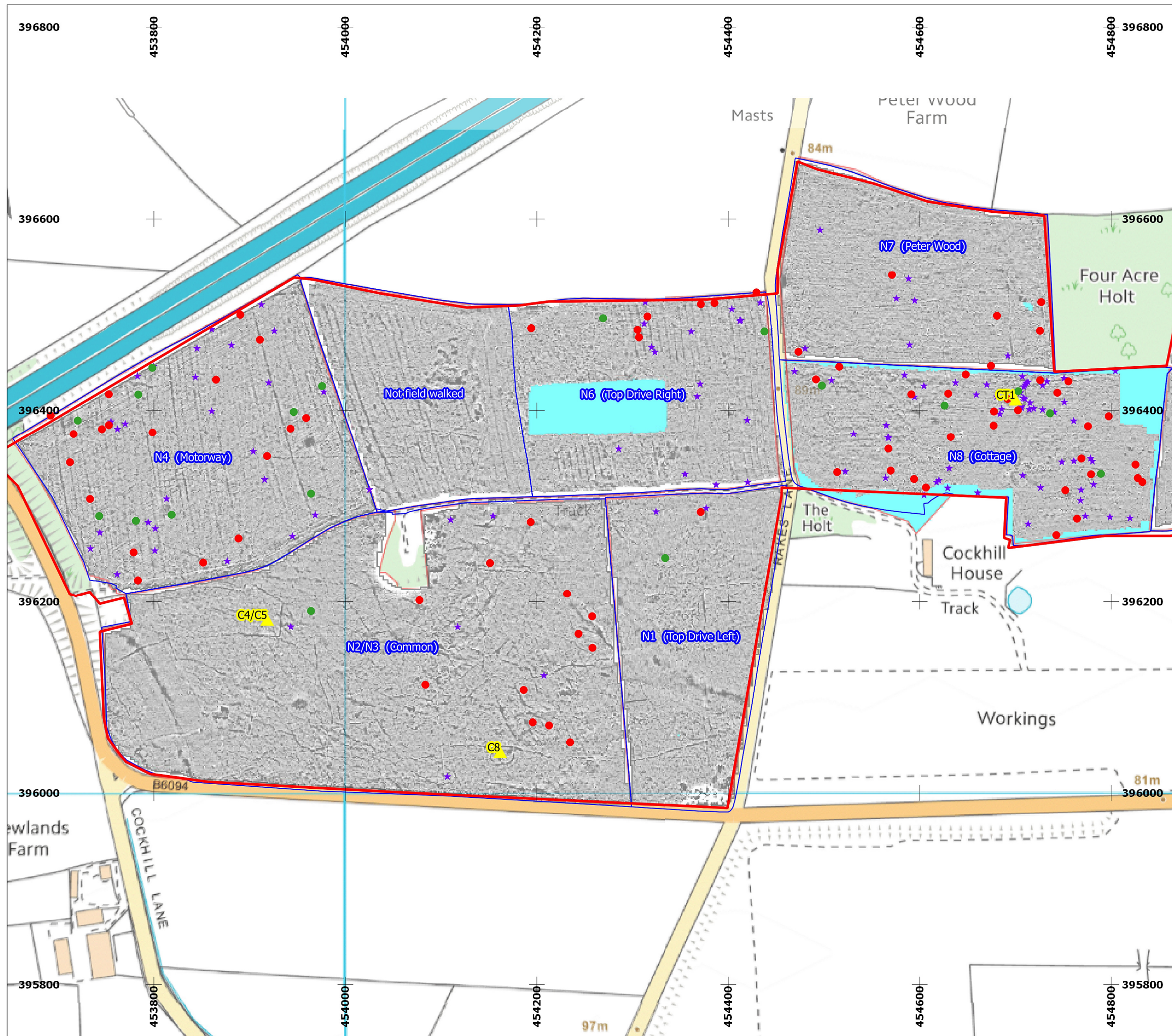
11.1 ARS Ltd would like to thank all those involved with the archaeological project, especially Robert Todd, farmer of the fields; Helen Kennedy, of Wardell Armstrong LLP, Mike Young, of Hope Construction Materials; and Andy Lines, of South Yorkshire Archaeology Service.

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**APPENDIX I: ARCHAEOLOGICAL RECORDS AND OASIS FORM**



**Figure 13:**  
**Flint and pottery distribution overlying**  
**geophysical greyscale plot**

- Field codes and names
- Flint (worked)
- Flint (unworked)
- ★ Pottery
- ▲ Geophysical anomalies discussed in the text

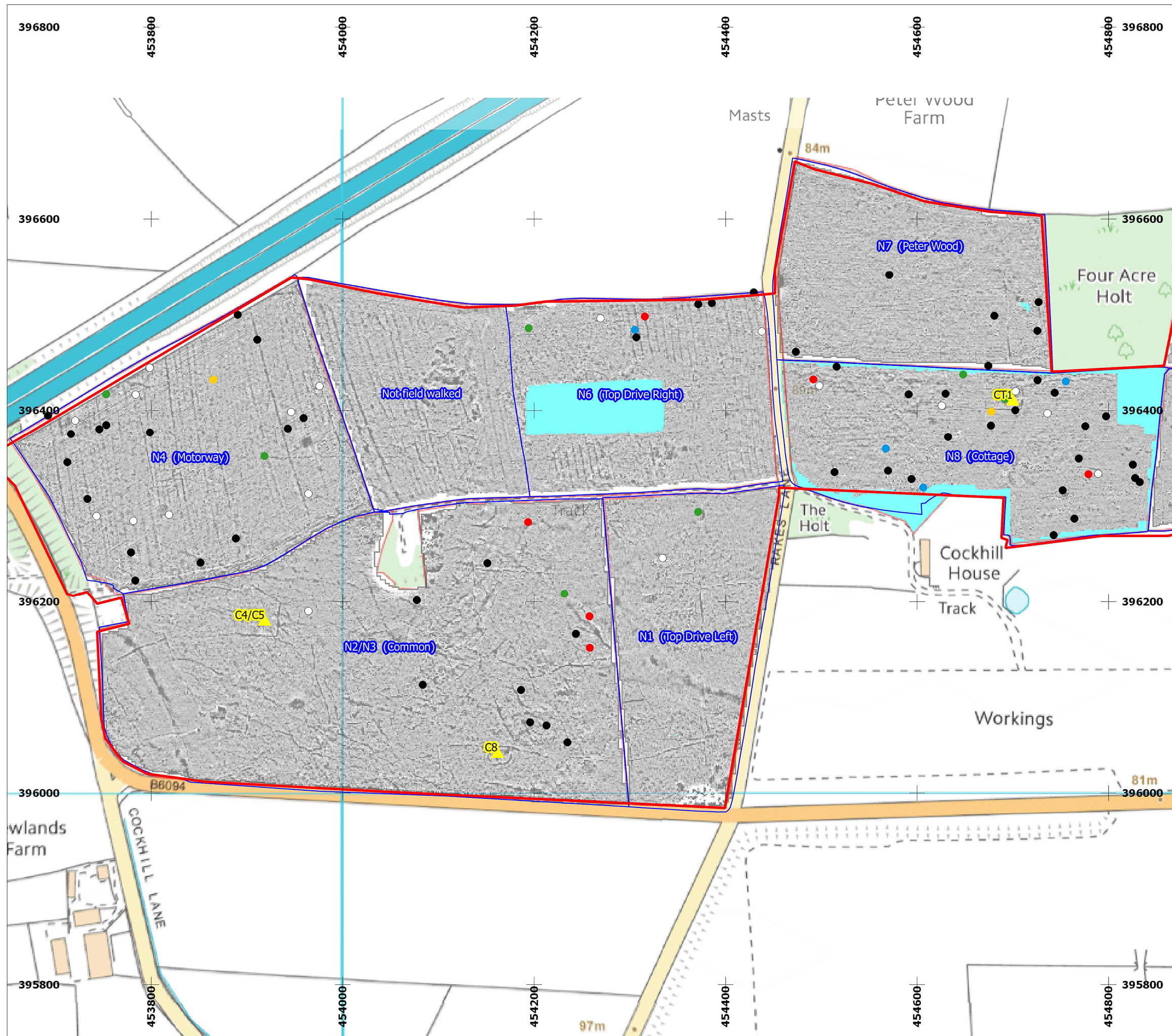


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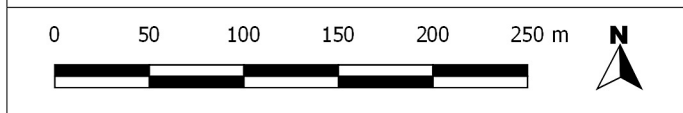
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**Figure 14:**  
**Detailed flint distribution overlying**  
**geophysical greyscale plot**

- Field codes and names
- Mesolithic
- Mesolithic/Neolithic
- Neolithic
- Neolithic/Bronze Age
- Indeterminate (worked)
- Indeterminate (unworked)
- ▲ Geophysical anomalies discussed in the text



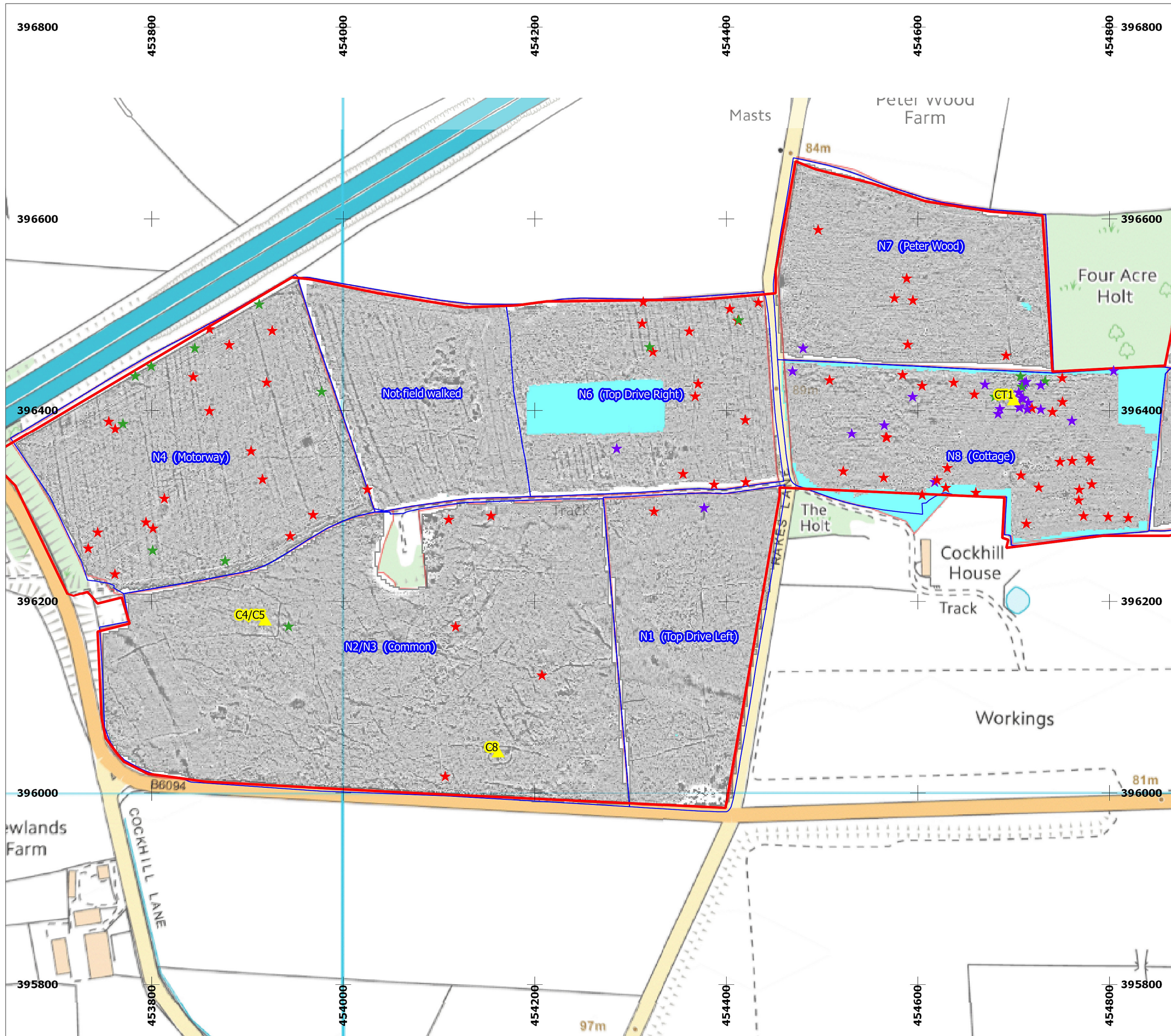
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**Figure 15:**  
**Detailed pottery distribution overlying**  
**geophysical greyscale plot**

- Field codes and names
- ★ Roman
- ★ Medieval
- ★ Post medieval
- ▲ Geophysical anomalies discussed in the text

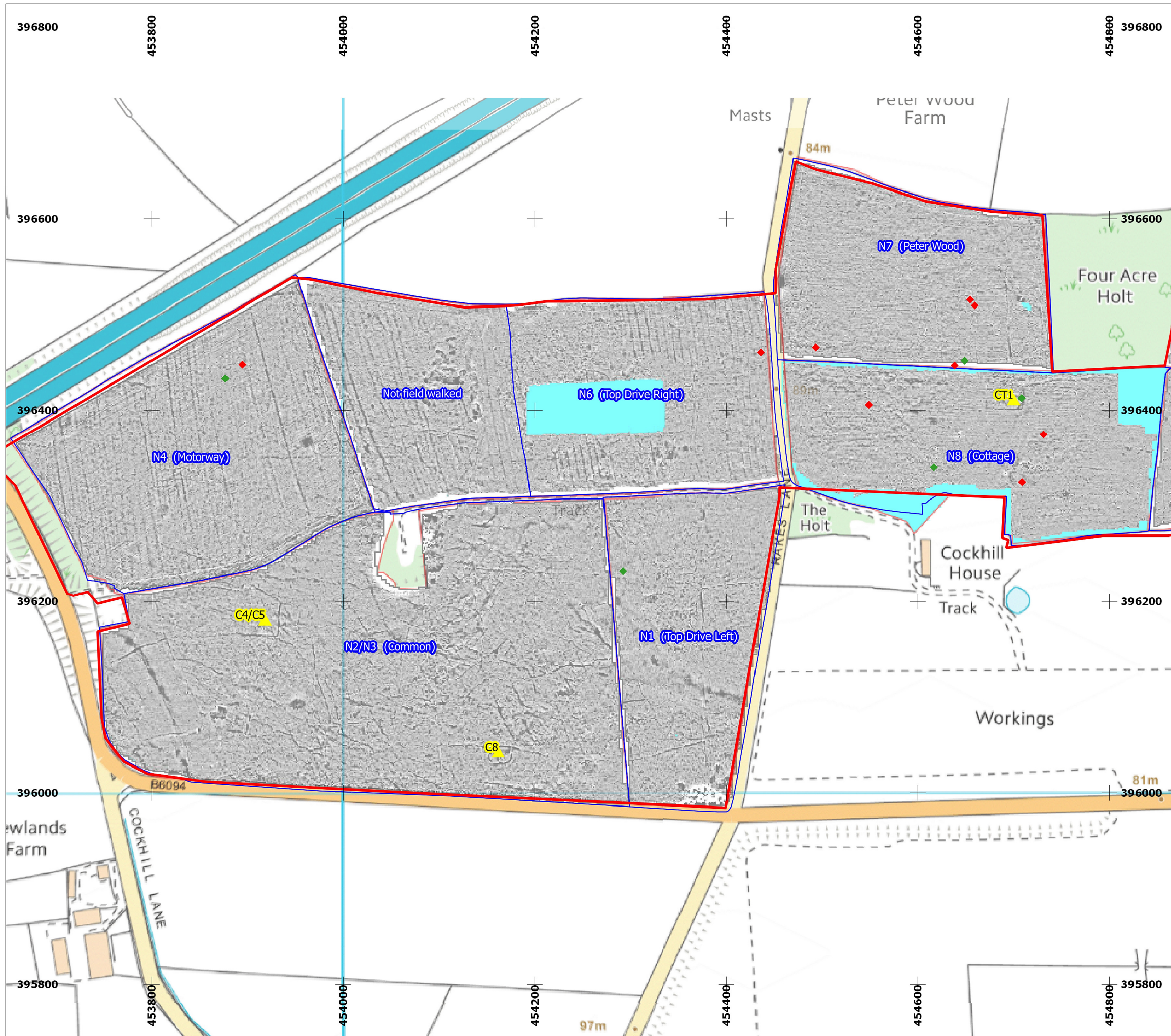


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**Figure 16:**  
**Slag and ironstone distribution**  
**overlying geophysical greyscale plot**

- ◆ Slag
- ◆ Ironstone
- ▲ Geophysical anomalies discussed in the text



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SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
404	N1	CBM		tile							post med				
407	N1	CBM		tile/drain							p-m/modern				
401	N1	CBM									post med				
405	N1	flint	light grey	chunky flake	notch	tertiary	distal (feather)	moderate	multiple		neolithic?	30	41	14	small notched piece with semi-abrupt retouch although rather somewhat irregular, slight whiteish patina
403	N1	flint	grey	chunk		tertiary	medial	moderate	multiple						Natural gravel flint although it with possible sign of having been utilised with edge wear traces, slight patination
408	N1	flint	light grey	flake	micro-scraper	secondary	medial	moderate	multiple		e mesolithic	19	21	7	moderately rolled and slightly battered flint micro-scraper, semi-abruptly retouched convex partial, although continuous, distal end , orangey thin cortical coverage, post-depositional damage evident
406	N1	pot									roman				samian, slip barely present, very abraded, decorated
423	N1	pot									18/19th c				brown/black earthen ware
402	N1	slag													
437	N2/N3	CBM		tile							post med				
419	N2/N3	CBM		tile/drain							p-m/modern				
430	N2/N3	CBM		tile/drain							p-m/modern				
431	N2/N3	CBM		drain							p-m/modern				
414	N2/N3	CBM		tile							post med				
427	N2/N3	CBM		tile							post med				
413	N2/N3	CBM		tile							post med				
439	N2/N3	CBM		tile							p-m/modern				
434	N2/N3	flint	grey	flake		tertiary	distal (feather)	bad, burnt	single			16	13	4	white patina, burnt, recent breakage
417	N2/N3	flint	light grey	flake	miscellaneous retouch	tertiary	distal (hinge)	moderate	multiple			29	31	9	moderate patina, thin dorsal retouch along hinge terminal
416	N2/N3	flint	brown	flake		secondary	medial	good, broken	single			16	12	4	utilised blade fragment with parallel ridges and right edge which contains wear traces both ventral and dorsal sides, orangey thin cortex
412	N2/N3	flint	light grey	chunky flake	end scraper	secondary	medial	moderate	multiple		mesolithic?	54	29	11	end scraper with semi-abrupt retouch from a rather chunky although flat flake-like blank, thin orangey cortex, heavy patina
409	N2/N3	flint	dark greyish brown	flake	notch	secondary	medial	good	single		neolithic?	25	19	6	slightly irregular semi-abrupt dorsal retouch/wear trace, thick (4mm) orangey cortex
421	N2/N3	flint	light grey	flake		tertiary	whole	good	multiple	flat, ventral lip and erailure		19	20	10	patina and moderate post-depositional damage, feather terminal
436	N2/N3	flint	light grey	chunky flake		tertiary	whole	good	multiple	plain		22	15	9	patina and moderate post-depositional damage, feather terminal
410	N2/N3	flint	light grey	flake	double-sided and end scraper	secondary	whole	moderate/good	multiple	flat, ventral lip	mesolithic?	35	22	8	semi-abrupt slightly irregular retouch, hinge terminal partially present as the edge retouch does not cover the entire end, orangey thin cortex, white patina
411	N2/N3	flint	brownish dark	flake		tertiary	whole	good	opposed	flat, ventral lip		19	28	4.5	slight patination and post-depositional damage, feather

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
			grey							and eraillure					terminal
415	N2/N3	flint	brown	spall		tertiary	whole	moderate	opposed	flat, ventral stepped damage		33	14	8	patina and moderate post-depositional damage, stepped terminal
420	N2/N3	flint	light grey	flake		tertiary	whole	moderate/go od	multiple	winged		7	16	3	feather terminal, patinated
433	N2/N3	flint	dark greyish brown	gravel chunk											natural gravel flint, recent breakage
422	N2/N3	glass									modern				
429	N2/N3	iron		plough							modern				
435	N2/N3	pot									18/19th c				stone ware brown glazed, base of bottle
428	N2/N3	pot									18/19th c				slip ware
300	N2/N3	pot									l med				led glazed
297	N2/N3	pot									18/19th c				brown black glazed
321	N2/N3	pot									18/19th c				brown black glazed
418	N2/N3	pot									18/19th c				brown black glazed
303	N2/N3	pot									18/19th c				brown black glazed
352	N2/N3	pot									19th c				stone ware bottle internal thread brown glazed
432	N2/N3	pot									l med				sandy grey ware cooking vessel
426	N2/N3	pot									l 19/20th c				white china
314	N2/N3	pot									18/19th c				brown glazed stone ware, base fragment?
424	N2/N3	pot									18/19th c				brown glazed stone ware, decorated
281	N2/N3	pot									l med				lead glazed rim sherd
425	N2/N3	quartz		clothing decoration							post med				octagonal plan and pyramidal pointed decorative jewellery with two small perforation which would allowed fitting on a clothing or similar
309	N4	asbestos									modern				
275	N4	CBM		drain							p-m/modern				
278	N4	CBM		tile							post med				
310	N4	CBM		tile							post med				
274	N4	CBM		tile							post med				
304	N4	CBM		tile							post med				
287	N4	CBM		tile							post med				
338	N4	CBM		tile							post med				
349	N4	CBM		tile							post med				
339	N4	CBM		tile							post med				
340	N4	CBM		tile							post med				
302	N4	CBM		tile							post med				

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
291	N4	CBM		tile							post med				
342	N4	CBM		tile							post med				
331	N4	CBM		tile							post med				
289	N4	CBM		tile							post med				
316	N4	CBM		tile							post med				
322	N4	CBM		brick							p-m/modern				
311	N4	CBM									post med				glazed
233	N4	CBM									post med				glazed
299	N4	flint	light brown	bladelet		tertiary	medial	moderate/good	single			16	8	3	broken bladelet, fairly parallel ridge and edge, patina
343	N4	flint	light brown	flake	miscellaneous retouch?	tertiary	medial	poor	not visible			26	24	8	triangular cross-sectioned flake heavily damaged, traces of abrupt although slightly irregular retouch along single lateral edge, patina
307	N4	flint	dark grey with frequent whiteish inclusions	chunk		tertiary	medial	moderate/poor	multiple						unworked flint chunk, severe damage
347	N4	flint	light grey	flake	end scraper	tertiary	medial	moderate	single		neolithic?	34	28	9	end scraper with semi-abrupt retouch distal end slightly convex, patina, post-depositional damage
326	N4	flint	light grey	chunk		tertiary		moderate/good	multiple						unworked flint chunk, severe damage
282	N4	flint	brownish grey	chunk		secondary		moderate/good	multiple						unworked flint chunk, severe damage, slight patina, thin beige brown cortex
292	N4	flint	light grey	blade	fabricator	tertiary	medial	moderate	multiple		meso/neolithic	59	29	13	triangular cross-sectioned blade slightly rod shaped, flaked over their dorsal face and one rounded end/tip that is abraded and worn from use, patina
328	N4	flint	light brown	flake	miscellaneous retouch	tertiary	medial	good/broken	single			15	17	2	broken flake with semi-abrupt retouch along one lateral edge
273	N4	flint	dark grey	flake		tertiary	medial	moderate	multiple			20	13	6	chunky flake/blade, severe damage, although with genuine traces of worked blade-like lithic
329	N4	flint	light grey	flake	arrowhead	tertiary	medial	moderate/good	multiple		late neolithic	36	17	4	oblique arrowhead, thin/semi-abrupt retouch bifacial lateral edge and hollow base forming a deliberately single barb, patina
327	N4	flint	light grey	bladelet		secondary	medial	good	single			24	11	4	broken bladelet, parallel ridge and edges, triangular cross section, thin orangey cortex, patina
335	N4	flint	light grey	spall		tertiary	medial	moderate	opposed			20	7	4	trapezoidal cross section, slight patina
270	N4	flint	grey	flake		tertiary	proximal	moderate	multiple	dihedral, ventral enlure		32	39	9	patinated flake, post-depositional damage
344	N4	flint	light grey	flake	miscellaneous retouched	secondary	proximal	moderate	multiple	punctiform, ventral enlure		19	18	3	possibly miscellaneous retouched flake, slightly irregular thin retouch on lateral dorsal edge, patina, thin orangey cortex
298	N4	flint	light whiteish grey	bladelet		tertiary	proximal	good	single	punctiform		21	9	3	broken bladelet, parallel ridge and edges, triangular cross section, patina
279	N4	flint	light grey	flake		tertiary	proximal	moderate	single	punctiform		19	16	4	possible wear traces though very patinated
337	N4	flint	light grey	flake		secondary	proximal	moderate	single	cortical		20	26	3	slight patina, post-depositional damage, possible wear traces

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
272	N4	flint	dark grey	flake		tertiary	whole	moderate	opposed	facetted		27	33	10	patinated thick flake with hinged terminal
313	N4	flint	light brown	flake		secondary	whole	good	single	flat, ventral erailure		13	12	3.5	stepped terminal, patina, orangey thin cortex
350	N4	flint	light brown	gravel chunk											natural gravel flint
332	N4	flint	dark greyish olive	gravel fragment											natural gravel flint
284	N4	flint	black	gravel fragment											natural gravel flint with whiteish cortex, recent damage
271	N4	flint	dark grey with frequent whiteish inclusions	gravel	core frag?	secondary		poor				25	50	29	natural gravel flint, thin orangey cortex, it could be a core fragment
317	N4	flint	dark grey	gravel fragment											natural gravel fragment, whiteish 2mm thick cortex
288	N4	flint													natural unknown rock
312	N4	flint	light grey	gravel fragment											natural gravel, patinated, burnt, white thick cortex
346	N4	flint	light grey	chunk		secondary		moderate							large chunk, thin orangey cortex, patina
320	N4	flint	light grey	chunk		tertiary									unworked flint chunk, severe damage
277	N4	flint	light grey	chunk		secondary									possible flake which has suffered extensive post-depositional damage loosing genuine knapping attributes
306	N4	glass									modern				
286	N4	iron									agricultural equipment				
296	N4	iron									agricultural equipment				
325	N4	iron									agricultural equipment				
348	N4	iron stone		natural											
351	N4	pot									l med				
285	N4	pot									l med				partial lead glazed survive
293	N4	pot									l med				grey lead glazed
341	N4	pot									l med				handle lead glazed
283	N4	pot									l med				lead glazed
330	N4	pot									18/19th c				brown black glazed handle
315	N4	pot									18/19th c				brown black glazed body scar of handle
295	N4	pot									18/19th c				brown black glazed
290	N4	pot									18/19th c				brown black glazed base
334	N4	pot									18/19th c				brown black
305	N4	pot									18/19th c				brown black glazed
333	N4	pot									18/19th c				brown black glazed
318	N4	pot									18/19th c				brown black glazed
276	N4	pot									18/19th c				brown black glazed

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
345	N4	pot									18/19th c				stone grey ware glazed
280	N4	pot									18/19th c				brown black glazed
308	N4	pot									18/19th c				brown black glazed
324	N4	pot									18/19th c				brown black glazed
319	N4	pot									19th c				stone ware brown glazed jar/bottle
336	N4	pot									l med				lead glazed decorated
301	N4	shell (oyster)													
269	N4	shell (oyster)													
307	N4	slag													
294	N4	stone (burnt shell?)		natural											
365	N6	asbestos									modern				
363	N6	CBM		drain pipe							p-m/modern				
371	N6	CBM		tile							post med				
357	N6	CBM		tile							post med				
372	N6	CBM		tile							post med				
377	N6	CBM		tile							post med				
390	N6	CBM		tile							post med				
362	N6	CBM		tile							post med				
384	N6	CBM		tile							post med				
383	N6	CBM		tile							post med				
382	N6	CBM		tile/brick							p-m/modern				
443	N6	CBM		tile/brick							p-m/modern				
368	N6	CBM		tile/brick							p-m/modern				
366	N6	CBM		tile/drain							p-m/modern				
355	N6	CBM		tile/drain							p-m/modern				
356	N6	CBM		pan tile							post med				
389	N6	CBM									post med				
353	N6	CBM									post med				
438	N6	CBM									post med				
440	N6	flint	grey	flake	awl (curated)	tertiary	distal (feather)	moderate	not visible		neo/BA	24	24	3	thin retouched dorsal converging tip, secondary thin retouch creating a straight edge possible as a result of damage, patina
388	N6	flint	brownish grey	flake	backed blade	tertiary	medial	moderate	single		mesolithic?	19	13	4	broken backed blade, trapezoidal cross section, abrupt retouch single edge, slight patina, possible e meso microlith
394	N6	flint	grey	flake	arrowhead	tertiary	medial	moderate	multiple		early neolithic	31	22	5.5	leaf-shaped arrowhead type 4B after Green's typology, retouch varies from bifacially invasive to thin
386	N6	flint	light whiteish grey	flake	piercer	tertiary	medial	moderate	multiple		l neo/e BA	47	22	6	piercer, thin retouch (occasionally bifacial) converging to tip, patina, abraded

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
385	N6	flint	light greyish brown	flake	miscellaneous retouched	primary	proximal	good	single	cortical		16	15	4	flake with short bifacially retouch along single edge, thin orangey cortex
441	N6	flint	light whiteish grey	flake		primary	whole	moderate/good	single	flat		14	25	6	thin orangey cortex, patina
376	N6	flint	dark brown	flake		secondary	whole	good	single	cortical winged		20	18	2.5	dorsal side parallel shallow ridges
393	N6	flint	light grey	chunk		tertiary									unworked chunk, post-depositional damage
378	N6	flint	dark greyish brown	chunky flake		primary	whole	good	single	cortical		50	24	10	nodular 2mm white cortex
392	N6	glass									post med				neck and rim fragment
361	N6	iron		plough?							modern				agricultural machinery
367	N6	iron stone		natural											
369	N6	pot									post med				midlands style black ware 17th c
391	N6	pot									18/19th c				brown glazed stone ware base
380	N6	pot									18/19th c				brown black glazed
442	N6	pot									18/19th c				brown black glazed base
373	N6	pot									18/19th c				brown black glazed base
379	N6	pot									18/19th c				brown black glazed rim
358	N6	pot									18/19th c				brown black glazed
359	N6	pot									18/19th c				brown black glazed
375	N6	pot									18/19th c				brown black glazed
360	N6	pot									18/19th c				brown black glazed
370	N6	pot									19/20th c				plant pot rim
364	N6	pot									19/20th c				plant pot rim
374	N6	pot									l med				
381	N6	pot									l med				
354	N6	pot									roman				grey ware
14	N7	asbestos									modern				
32	N7	basalt		natural											natural basalt
4	N7	bone													tooth fragment
24	N7	bone													
19	N7	CBM		tile							post med				
10	N7	CBM		roof tile							post med				
9	N7	CBM		tile?							post med				undiagnostic fragment
40	N7	CBM		tile							post med				
6	N7	CBM		tile							post med				
31	N7	CBM		tile							post med				
36	N7	CBM		tile							post med				
38	N7	CBM		tile							post med				



SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
13	N7	CBM		tile							post med				
22	N7	CBM		tile							post med				
21	N7	CBM		tile							post med				
5	N7	CBM		tile/brick							p-m/modern				
34	N7	CBM		tile							post med				
39	N7	CBM		tile							post med				
23	N7	CBM		tile							post med				
37	N7	clay pigeon									modern				
25	N7	flint	light grey	flake		primary	distal (feather)	moderate	single			21	14	2	patina, thin orangey cortex
33	N7	flint	light grey	blade		secondary	distal (hinge)	moderate/good	single			26	12	4	wear traces, patina
1	N7	flint	light grey	blade		tertiary	proximal	good	opposed	facetted		31	14	5	slight patination
11	N7	flint	light whitesih grey	flake		tertiary	whole	moderate/good	single	facetted		24	13	4	patina, stepped terminal
26	N7	flint	light grey	core		tertiary	whole	moderate/poor				28	29	30	exhausted multiplatform flake/blade core, severely abraded, patina
20	N7	flint	light whitesih grey	chunk		secondary	medial	moderate				30	16	7	fragment from opposed platform core, thin yellowish orange, post-depositional damage
28	N7	iron stone		natural											
3	N7	iron stone		natural											
7	N7	iron stone		natural											
27	N7	iron stone		natural											
12	N7	pot									18/19th c				brown black glazed
15	N7	pot									18/19th c				brown black glazed rim
29	N7	pot									18/19th c				brown black glazed rim
41	N7	pot									18/19th c				brown black glazed
35	N7	pot									18/19th c				brown black glazed
30	N7	pot									18/19th c				brown black glazed
2	N7	pot									roman				grey ware
8	N7	slag													
165	N8	asbestos													
168	N8	CBM		pan tile							post med				
173	N8	CBM		pan tile							post med				
156	N8	CBM		tile							post med				
134	N8	CBM		tile							post med				
136	N8	CBM		tile							post med				
132	N8	CBM		tile							post med				
153	N8	CBM		tile							post med				

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
223	N8	CBM		tile							post med				
114	N8	CBM		tile							post med				
263	N8	CBM		tile							post med				
101	N8	CBM		tile							post med				
222	N8	CBM		tile							post med				
181	N8	CBM		tile							post med				
116	N8	CBM		tile							post med				
193	N8	CBM		tile							post med				
244	N8	CBM		tile							post med				
210	N8	CBM		tile							post med				
233	N8	CBM		tile							post med				
115	N8	CBM		tile							post med				
239	N8	CBM		tile							post med				
198	N8	CBM		tile							post med				
221	N8	CBM		tile							post med				
183	N8	CBM		tile							post med				
133	N8	CBM		tile							post med				
109	N8	CBM		tile							post med				
236	N8	CBM		tile							post med				
219	N8	CBM		tile							post med				
232	N8	CBM		tile							post med				
206	N8	CBM		tile							post med				
100	N8	CBM		tile							post med				
175	N8	CBM		tile							post med				
127	N8	CBM		tile							post med				
147	N8	CBM		tile							post med				
96	N8	CBM		tile							post med				
174	N8	CBM		tile							post med				
113	N8	CBM		tile							post med				
125	N8	CBM		tile							post med				
240	N8	CBM		tile							post med				
176	N8	CBM		tile							post med				
205	N8	CBM		tile							post med				
231	N8	CBM		tile							post med				
243	N8	CBM		pan tile							post med				
195	N8	CBM		pan tile							post med				
131	N8	CBM		pan tile							post med				

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
237	N8	CBM		brick							p-m/modern				
146	N8	CBM		tile							post med				
251	N8	CBM		tile							post med				
70	N8	CBM		tile							post med				
225	N8	CBM		tile							post med				
250	N8	CBM		tile							post med				
259	N8	CBM		tile							post med				
200	N8	CBM		tile							post med				
228	N8	CBM		tile							post med				
258	N8	CBM		tile							post med				
246	N8	CBM		tile							post med				
256	N8	CBM		tile							post med				
42	N8	CBM		tile							post med				
253	N8	CBM		tile							post med				
57	N8	CBM		tile							post med				
64	N8	CBM		tile							post med				
252	N8	CBM		tile							post med				
48	N8	CBM		tile							post med				
82	N8	CBM		tile							post med				
61	N8	CBM		tile							post med				
158	N8	CBM		tile							post med				
65	N8	CBM		tile							post med				
157	N8	CBM		tile							post med				
197	N8	CBM		tile							post med				
76	N8	CBM		tile							post med				
159	N8	CBM		tile							post med				
229	N8	CBM		tile							post med				
45	N8	CBM		tile							post med				
170	N8	CBM		tile							post med				
224	N8	CBM		tile							post med				
230	N8	CBM		tile							post med				
80	N8	CBM		pan tile							post med				
169	N8	CBM		brick							p-m/modern				
215	N8	CBM									p-m/modern				tile
249	N8	CBM									p-m/modern				tile
72	N8	CBM									p-m/modern				drain
119	N8	CBM									p-m/ modern				tile

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
264	N8	chert	grey	chunk											natural unworked
78	N8	clay		clay pipe							post med				decorated bulb small fragment
163	N8	clay pigeon		clay pigeon							modern				
154	N8	clay pigeon									modern				
245	N8	clay pigeon									modern				
268	N8	clay pigeon									modern				
255	N8	clay pigeon									modern				
257	N8	clay pigeon									modern				
150	N8	clay pigeon									modern				
43	N8	coal		natural											
164	N8	flint	light grey	flake	notch	secondary	distal	moderate/poor	single		neo/BA	15	19	4	small notch with abrupt retouch, light brownish cortex, patina
106	N8	flint	light whiteish grey	flake	knife?	tertiary	distal (hinge)	moderate/good	single		neolithic?	31	21	5	partial dorsal invasive retouch becoming semi-abrupt toward the distal end left lateral side, opposite edge wear traces, possibly a plano-convex knife
112	N8	flint	light grey	flake		tertiary	medial	moderate	single			11	20	5	trapezoidal cross section, patina
73	N8	flint	dark blackish brown	flake		primary	medial	moderate	single			45	59	12	cortical large flake, 12mm thick light brownish orange cortex
267	N8	flint	grey	flake		tertiary	medial	good	single			15	13	2	semi-parallel ridges
69	N8	flint	dark blackish brown	flake	awl (curated)	tertiary	medial	moderate/good	multiple		neo/BA	35	18	8	thin retouched dorsal converging tip and single lateral edge, secondary thin retouch converging tip, patina, post-depositional damage
254	N8	flint	whiteish	flake		tertiary	medial	moderate/good	not visible			24	14	4	broken laminar piece with parallel edges and central ridge, wear traces along edges, patina
184	N8	flint	grey	bladelet		secondary	medial	moderate	single			24	9	3.5	broken bladelet, orangey cortex, patina
220	N8	flint	light brown	flake		secondary	proximal	good	single	winged, lip, pronounced bulb		18	12	2	parallel ridges, orangey thin cortex
118	N8	flint	grey	flake		tertiary	proximal	moderate	opposed	flat, pronounced bulb		21	27	4	patina, post-depositional damage
218	N8	flint	grey	flake		secondary	proximal	moderate/good	single	punctiform, lip, erailure		13	16	4	thin orangey cortex, slight patina
140	N8	flint	whiteish grey	flake	end scraper	secondary	proximal	moderate/good	single	flat	meso/e neo	40	21	9	semi-keeled convex end scraper with abrupt retouch, curated, patina, thin orangey cortex
192	N8	flint	grey	flake	micro-scraper	tertiary	proximal	moderate/good	multiple	flat, erailure	e mesolithic	26	24	9	flint micro-scraper, semi-abruptly retouched convex partial, although continuous, distal end, little post-depositional damage
135	N8	flint	light grey	flake		tertiary	proximal	moderate/good	single	flat, lip		18	16	5	patina, post-depositional damage
105	N8	flint	light grey	flake		tertiary	proximal	moderate/good	single	absent due to large erailure		23	15	2	

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
66	N8	flint	grey	flake		tertiary	proximal	good	single	winged		20	16	4	patina
110	N8	flint	greyish brown	flake	miscellaneous retouched	secondary	whole	moderate	single	winged, erailure		14	20	3	thin retouched dorsal converging point perhaps used as an awl, slight patina
149	N8	flint	grey	flake		secondary	whole	good	single	flat, erailure		28	18	5	hinge terminal, white thin cortex
162	N8	flint	grey	flake		tertiary	whole	moderate	multiple	flat, lip, pronounced bulb		48	58	12	post-depositional damage, wear traces, patina
201	N8	flint	dark blackish brown	blade		tertiary	whole	good	single	flat		36	18	5	wear traces along entire left (thinner) edge, cutting implement
148	N8	flint	grey	flake		tertiary	whole	moderate/good	multiple	flat		20	20	5	slight damaged base
49	N8	flint	light grey	flake	saw	tertiary	whole	moderate	single	flat, lip, pronounced bulb	neolithic	43	39	8	almost entire ventral thin retouch serrated edge, patina
122	N8	flint	light grey	flake	micro-scraper	secondary	whole	moderate/good	single	cortical	mesolithic?	16	24	4	flint micro-scraper, semi-abruptly retouched convex partial, although continuous, distal end, orangey thin cortical coverage, patina
189	N8	flint	whiteish	flake	miscellaneous retouched	tertiary	whole	moderate/good	single	winged		35	22	4	single lateral edge thin retouch covering most of its length forming a proximal tip, patina
261	N8	flint	light grey	flake	end scraper?	primary	whole	moderate	single	flat		72	62	17	crudely semi-abrupt retouch partial flatish end, 3mm thick orangey cortex, patina, post-depositional damage
188	N8	flint	grey	flake	miscellaneous retouched	tertiary	whole	moderate/good	single	winged, pronounced bulb		29	16	6	thin retouch along ventral distal end, slight patina
247	N8	flint	dark blackish brown	flake	awl/borer	secondary	whole	moderate/good	single	facetted	ne/BA	51	23	6	slightly crudely semi abrupt retouched dorsal converging tip rather worn, additional thin retouch single lateral edge close to the butt
187	N8	flint	light whiteish grey	blade		tertiary	whole	moderate	multiple	flat, lip		42	26	12	patina, post-depositional damage
139	N8	flint	grey	chunk		secondary									unworked flint chunk, severe post-depositional damage
77	N8	flint		gravel											natural gravel flint severely rolled and abraded
191	N8	flint	dark grey	chunk											unworked flint chunk, post-depositional damage, whiteish thin cortex
123	N8	flint	dark grey	gravel											possible nodular piece severely damaged, unworked
58	N8	flint	light grey	gravel											gravel fragment which could originate from a struck nodule
137	N8	glass									p-m/modern				
204	N8	glass									p-m/modern				
152	N8	glass									modern				
227	N8	glass									modern				
213	N8	glass									modern				
85	N8	glass									modern				
171	N8	glass									p-m/modern				
172	N8	glass									p-m/modern				

SF No.	Field	Material	Colour	Type: General	Type: Specific	Reduction sequence	Portion	State	Scar	Butt	Period	L (mm)	W	T	Notes
138	N8	iron		hook							p-m/modern				
202	N8	iron		nail							p-m/modern				
120	N8	iron		nail, whole							p-m/modern				
209	N8	iron stone		natural											
124	N8	iron stone		natural											
160	N8	iron stone		natural											
126	N8	pot									roman				grey ware
104	N8	pot									roman				grey ware
63	N8	pot									roman				grey ware
79	N8	pot									roman				grey ware
97	N8	pot									roman				grey ware rim
121	N8	pot									roman				grey ware
142	N8	pot									roman				grey ware
99	N8	pot									roman				grey ware
54	N8	pot									roman				grey ware
55	N8	pot									roman				grey ware
151	N8	pot									roman				grey ware
67	N8	pot									l med				
107	N8	pot									l med				
56	N8	pot									l med				
92	N8	pot									roman				cooking pot
60	N8	pot									roman				grey ware rim
87	N8	pot									roman				bowl dish rim
71	N8	pot									roman?				
241	N8	pot									roman?				
248	N8	pot									18/19th c				brown black glazed
211	N8	pot									18/19th c				brown black glazed
47	N8	pot									18/19th c				brown black glazed
177	N8	pot									18/19th c				brown black glazed
234	N8	pot									18/19th c				brown black glazed
68	N8	pot									18/19th c				brown black glazed
90	N8	pot									18/19th c				stone ware jar base
196	N8	pot									19th c				stone ware bottle part of base and body
226	N8	pot									18/19th c				slip ware
83	N8	pot									roman				grey ware
128	N8	pot									roman				grey ware
111	N8	pot									roman				grey ware rim







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**OASIS ID: archaeol5-207186**

### Project details

Project name	Holme Hall Quarry, South Yorkshire. Archaeological fieldwalking survey
Short description of the project	Fieldwalking survey within six fields proposed to be redeveloped for magnesian limestone extraction at Holme Hall Quarry. Artefacts surface collection and recording included a large number of lithics of late prehistoric periods as well as a series of Romano-British pottery. The results together with a geophysical survey will assist designing the location of a programme of targeted evaluation trenching within the site as part of the planing application.
Project dates	Start: 02-03-2015 End: 11-03-2015
Previous/future work	Yes / Yes
Type of project	Field evaluation
Monument type	FIELD Uncertain
Significant Finds	LITHICS Late Prehistoric
Significant Finds	POTTERY Roman
Significant Finds	POTTERY Post Medieval
Methods & techniques	"Fieldwalking"
Development type	Mineral extraction (e.g. sand, gravel, stone, coal, ore, etc.)
Prompt	Planning condition
Position in the planning process	Pre-application

### Project location

Country	England
Site location	SOUTH YORKSHIRE DONCASTER EDLINGTON Holme Hall Quarry
Study area	55.00 Hectares
Site coordinates	SK 5461 9625 53.4599093874 -1.17741161883 53 27 35 N 001 10 38 W Point

### Project creators

Name of Organisation	Archaeological Research Services Ltd
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Project brief originator South Yorkshire Archaeology Service  
Project design originator Archaeological Research Services Ltd  
Project director/manager Clive Waddington  
Project supervisor Alvaro Mora-Ottomano

### Project archives

Physical Archive recipient Doncaster Museums Service  
Physical Contents "Ceramics","Metal","Worked stone/lithics"  
Digital Archive recipient Doncaster Museums Service  
Digital Contents "none"  
Digital Media available "Spreadsheets","Survey"  
Paper Archive recipient Doncaster Museums Service  
Paper Contents "none"  
Paper Media available "Photograph","Plan","Report","Survey "

### Project bibliography 1

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