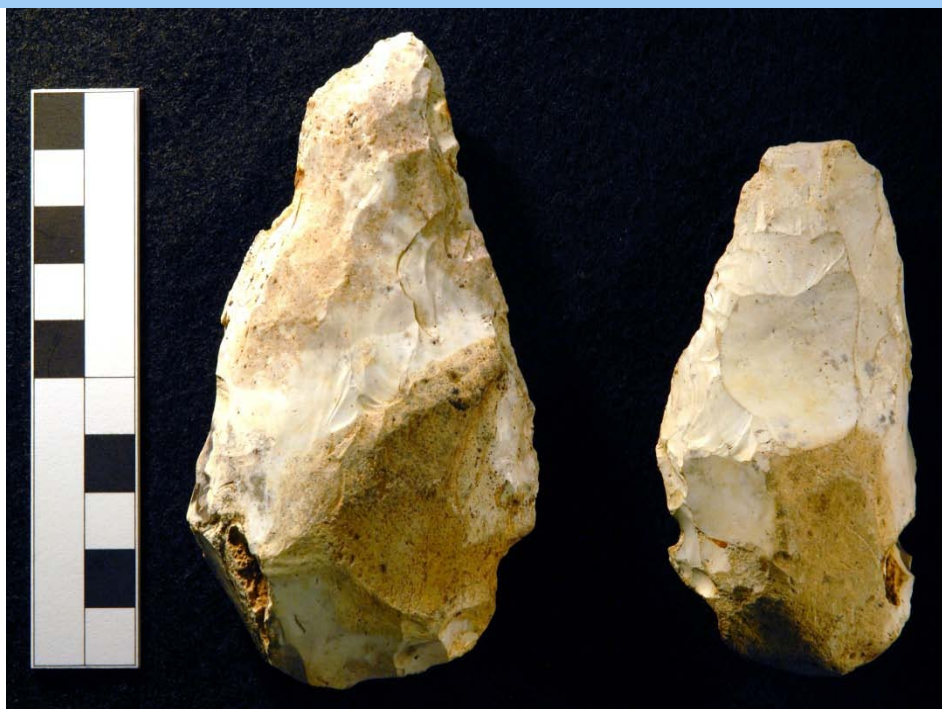




# Northamptonshire Archaeology

Archaeological fieldwalking  
and geophysical surveys  
of land at J21 M25, St Albans  
Hertfordshire  
November 2010 – January 2011



## Northamptonshire Archaeology

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Report 11/20

February 2011



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**OASIS REPORT FORM**

PROJECT DETAILS		
Project name	Archaeological fieldwalking and geophysical surveys of land at J21 M25, St Albans, Hertfordshire, November 2010 – January 2011	
Short description	Northamptonshire Archaeology was commissioned to carry out fieldwalking and detailed magnetometer surveys on 60ha of land located to the south-west of St Albans, Hertfordshire. The fieldwalking survey recovered a range of artefacts dating from the Palaeolithic to the present day but no distributions of archaeological significance were observed. The geophysical survey suggested the presence of possible undated ditches which had been disturbed by large areas of made ground. The made ground may relate to the construction of the M25 and M1 motorways.	
Project type	Fieldwalking and geophysical survey (magnetometry)	
Site status	NA	
Previous work	Desk-based assessment (Prospect Archaeology: 2010)	
Current Land use	Arable	
Future work	Unknown	
Monument type/ period		
Significant finds	Palaeolithic handaxes	
PROJECT LOCATION		
County	Hertfordshire	
Site address	Noke Lane, Chiswell Green, St Albans	
Study area	c60ha	
OS Easting & Northing	NGR TL 1216 0355	
Height OD	80-88m	
PROJECT CREATORS		
Organisation	Northamptonshire Archaeology	
Project brief originator	Simon West, St Albans Museums Service	
Project Design originator	Nansi Rosenberg, Prospect Archaeology	
Director/Supervisor	Tim Upson-Smith, John Walford	
Project Manager	Mark Holmes, Adrian Butler	
Sponsor or funding body	Decathlon UK	
PROJECT DATE		
Start date	November 2010	
End date	January 2011	
ARCHIVES		
	Location	Content
Physical	OXY10	3 archive boxes of artefacts
Paper		Site survey records
Digital		Geophysical survey, GIS data, report
BIBLIOGRAPHY		
	Journal/monograph, published or forthcoming, or unpublished client report	
Title	Archaeological fieldwalking and geophysical surveys of land at J21 M25, St Albans, Hertfordshire, November 2010 – January 2011	
Serial title & volume	NA report 11/20	
Author(s)	T Upson-Smith, J Walford	
Page numbers		
Date	18/02/11	

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**ARCHAEOLOGICAL FIELDWALKING  
AND GEOPHYSICAL SURVEYS  
OF LAND AT J21 M25, ST ALBANS, HERTFORDSHIRE  
NOVEMBER 2010 – JANUARY 2011**

*Abstract*

*Northamptonshire Archaeology was commissioned to carry out fieldwalking and detailed magnetometer surveys on 60ha of land located to the south-west of St Albans, Hertfordshire. The fieldwalking survey recovered a range of artefacts dating from the Palaeolithic to the present day but no distributions of archaeological significance were observed. The geophysical survey suggested the presence of possible undated ditches which had been disturbed by large areas of made ground. The made ground may relate to the construction of the M25 and M1 motorways.*

## **1 INTRODUCTION**

Northamptonshire Archaeology (NA) was commissioned by Prospect Archaeology, on behalf of the Decathlon UK, to carry out archaeological fieldwalking and geophysical surveys on approximately 60ha of land to the south-west of St Albans, Hertfordshire centred on (NGR TL 1216 0355, Fig 1). The site lies to the east of the M1 and north of the M25.

The surveys were undertaken in order to inform planning considerations for the construction of a sports village on the site.

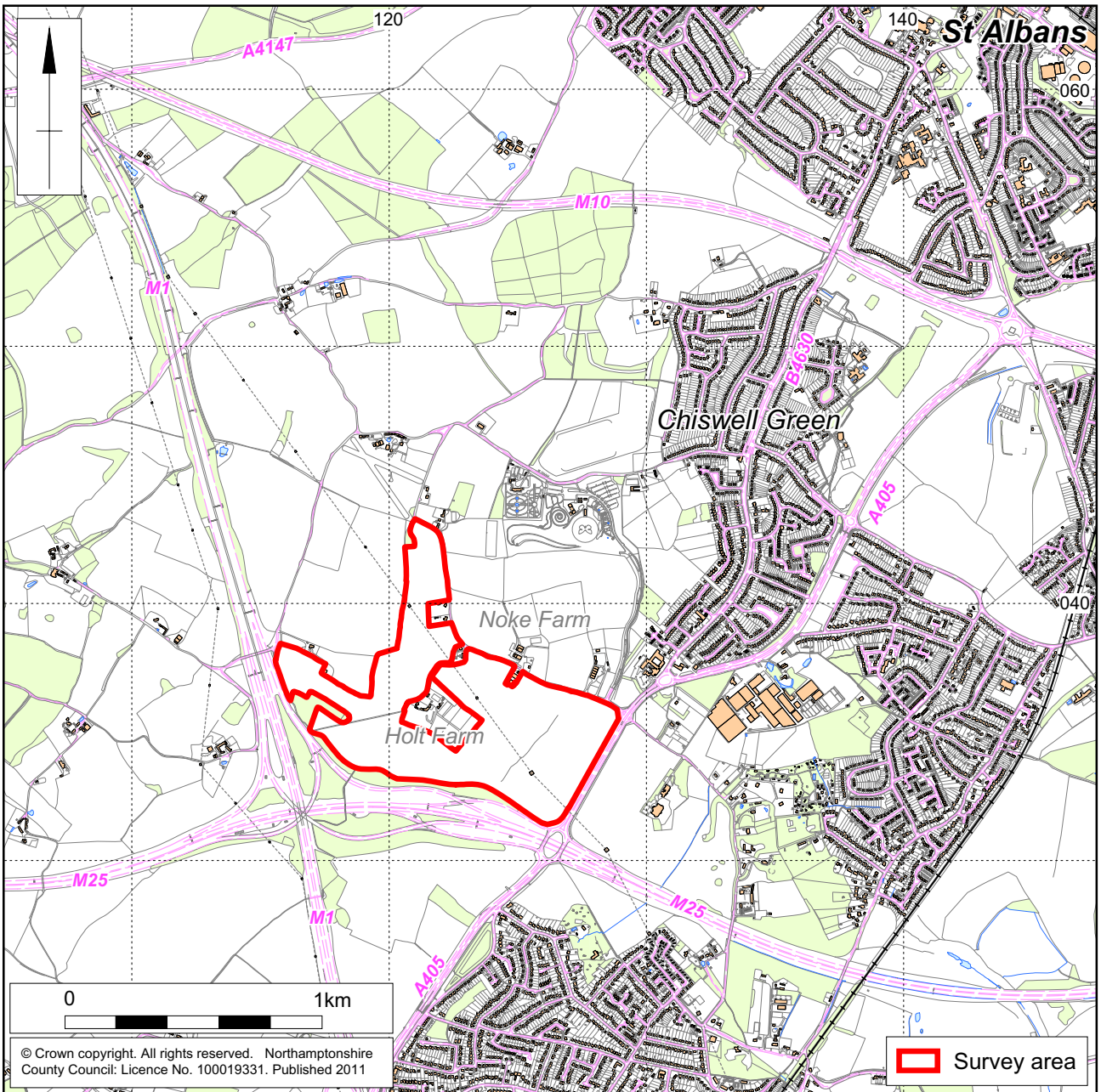
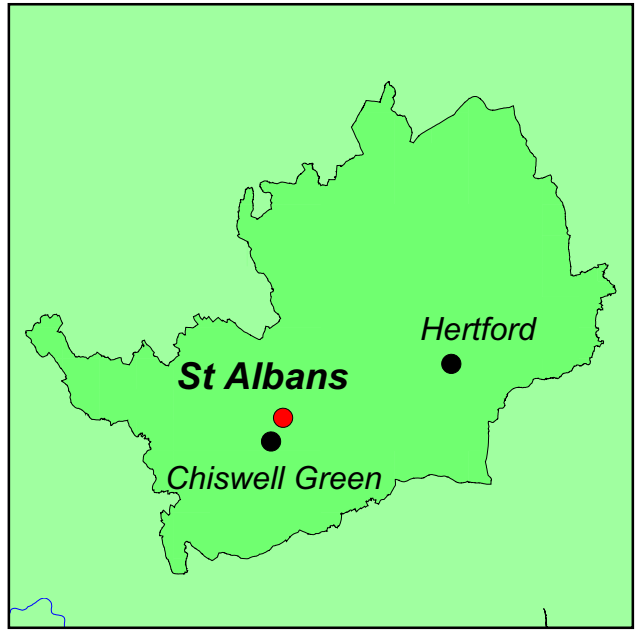
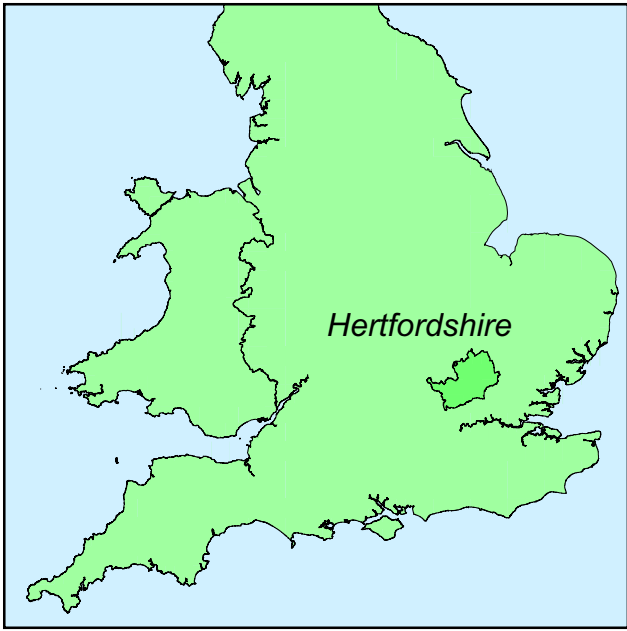
The fieldwalking survey was carried out in November 2010 whilst the geophysical survey was carried out between November 2010 and January 2011.

## **2 TOPOGRAPHY AND GEOLOGY**

The proposed development site lies on level ground to the south-west of St Albans and Chiswell Green. It is bounded by the M25 motorway to the south, by the M1 motorway to the west and the A405 trunk road to the east. Noke Lane and agricultural fields lie to the north. Holt Farm itself lies in the centre of the development area but was not part of the survey.

The site stands at an elevation of between 80m and 88m aOD. There is, however, a pronounced hillock to the south of Holt Farm. At the time of survey the proposed development area was under cultivation.

The geology of the site is mapped as White Chalk bedrock overlaid by a drift of sand and flinty gravel (<http://maps.bgs.ac.ukgeoindex/default.aspx>). The results of the present geophysical survey suggest that made ground may also be present (see section 5, below).



Scale 1:25,000

Site location Fig 1

### 3 ARCHAEOLOGICAL BACKGROUND

The area around St Albans is well represented in the archaeological record. A statement of the historic assets of the site may be found in a desk-based assessment (Prospect Archaeology 2010). A summary of that information is presented below.

The prehistoric periods are mainly represented by scatters of worked flints (HHER 600, 4544, 4545, 9757).

During the Late Iron Age a Catuvllauni Oppidum was situated 8km to the north of the proposed development site at Wheathampstead (Cunliffe 2005, 159). Other evidence for Iron Age activity occurs south of the development site where Late Iron Age pottery was found (HHER 4541).

The surrounding area was important in the Roman period when St Albans was a major regional centre of pottery production (*Verulamium*). It was located 35km north of London (*Londinium*) and straddle Watling Street which was a principal Roman road. However, the area of the proposed development lies some distance away from the Roman core, although Roman tile was found immediately adjacent to the A405 (HHER 9758).

St Albans continued to be an urban and a religious centre into the medieval period. More locally both Holt Farm (HHER 9513) and Daneswick (HHER 16274) have medieval connections. Holt Farm is situated next to a c12th to 13th-century moated site (HHER 2033) while Daneswick could relate to a settlement mentioned in a 1512 court roll (Prospect Archaeology 2010).

A historic map regression was undertaken as part of the desk-based assessment. The area was characterised by small square or rectangular fields that maintained a relatively unchanged pattern from at least the 18th century up to the construction of the M25 motorway in the 1980s. After this point boundaries were removed to create larger-sized fields.

The HHER notes the site of a polygonal pill box (HHER 6620) near the A405 Noke Lane cross road. It is unknown if this relates to further Second World War defences in the area; as there would have been a need for anti-aircraft structures in the vicinity. The construction of the M1 and M25 motorways greatly impacted on the setting of the area, with the development area lying at the junction of the two roads.

### 4 FIELDWALKING

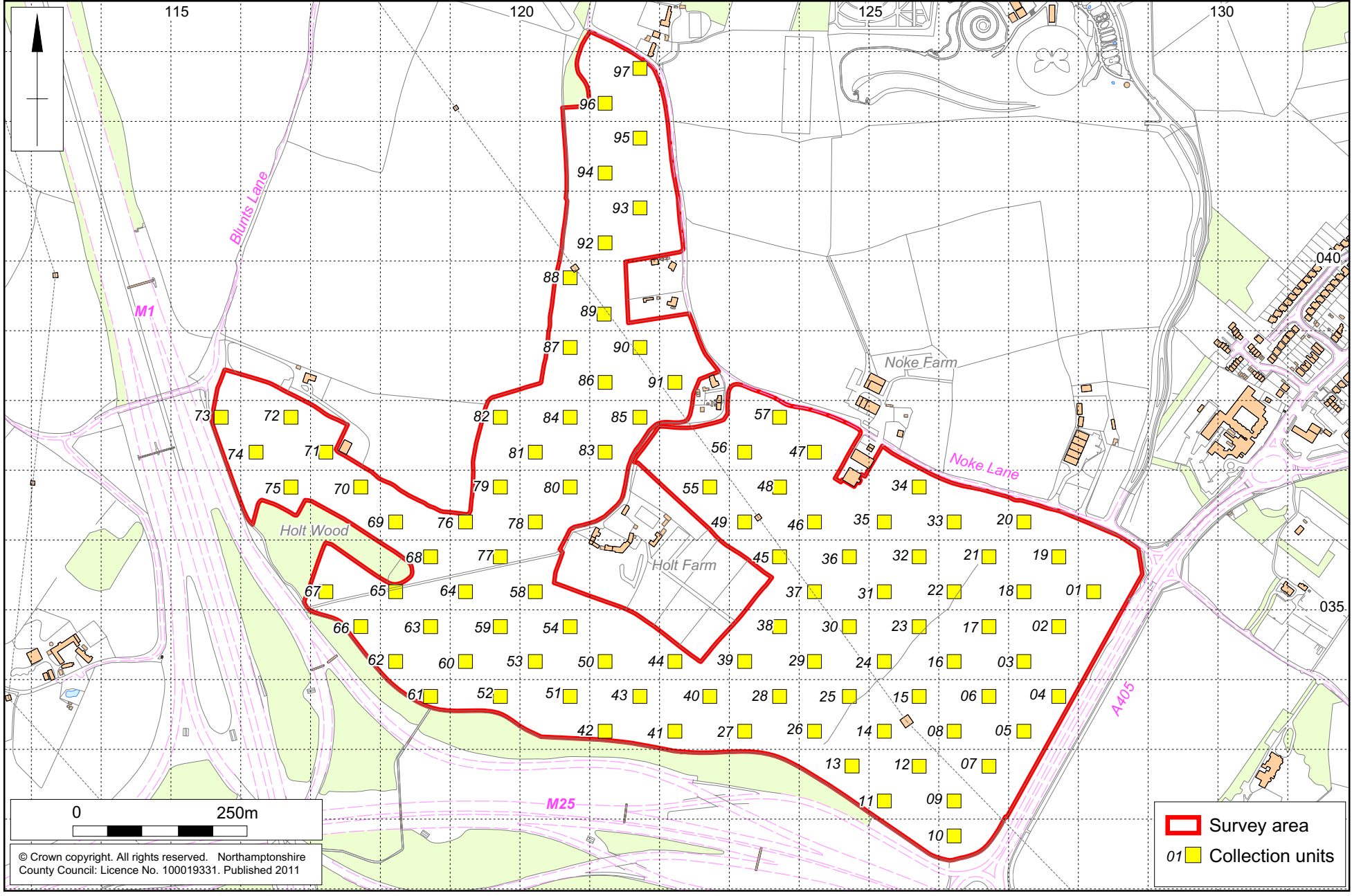
#### 4.1 Methodology

The fieldwalking methodology comprised 100% surface artefact collection, including modern artefacts. The survey was based on walking 97 separate 20m x 20m collection units which were distributed at regular intervals across the site (Fig 2). The collection area, comprising 3.88ha, forms a 6.5% sample of the available assessment area. The fieldwalking was carried out under favourable conditions (overcast skies) and the results are considered to be reliable with individual walkers each collecting a full range of artefact types.



1:7,500

Locations of fieldwalking collection units Fig 2



0 250m

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Survey area  
01 Collection units

## 4.2 Summary

The survey collected artefacts ranging from Palaeolithic hand axes to medieval and later pottery. Ceramic building material, clay tobacco-pipe, honestones, slag, glass and shell were also recovered. The artefacts and ecofacts are reported on by type and are associated with figures where pertinent. The figures (Figs 4 - 13) show finds categories mapped by density per collection unit. Due to the small quantity of artefacts and lack of intrinsic significance the shell, hone-stone, clay-pipe, iron objects and glass have not been mapped in this report.

## 4.3 Flint handaxes by W A Boismier

Two Palaeolithic handaxes manufactured from small flint nodules were recovered during fieldwalking (Figs 3 and 4). Handaxe 1 was from collection unit 74 and is a small pointed handaxe with a rounded point, straight edges and a partially cortical butt. It is covered by a cream/off-white coloured patina and displays minor edge-damage and crushing along both edges with the flake scars on one face partially rounded. Handaxe 2, from collection unit 88, is also a small pointed handaxe with a broken tip, straight edges and a cortical butt. Like the other artefact it is covered by a cream/off-white patina and exhibits edge-damage and crushing along both edges with one face severely frost-damaged. Both artefacts are typical examples of Wymer's Type F handaxe classification scheme (Wymer 1968) and date to sometime between MIS 6 and MIS 11 (c 150,000 – 400,000 years ago).



Handaxes 1 (left) and 2 (right) (Scale 100mm)

Fig 3

Handaxes of a similar age have also been recorded from Park Street and at other locations within the parishes of St Stephen and St Michael (Wymer 1999). This would perhaps suggest that the finds recovered from the site form part of the general spread of Palaeolithic materials associated with glacio-fluvial sands and gravels of the Colne and Ver valleys.

#### 4.4 Other worked flint by Yvonne Wolfram-Murray

In addition to the two Palaeolithic handaxes, 97 pieces of worked flint were recovered as surface finds during the fieldwalking survey (Figs 4, 5 and 6, Appendix 1).

The condition of the assemblage is poor with all flints showing post-depositional edge damage ranging from frequent nicks to the crushing of the edges. The majority of the post-depositional edge damage was caused by ploughing and abrasion of the flint in the soil. Patination is occasionally present on the flint, consisting of a slight discolouration of the surface and is variable across the area.

The raw material is a vitreous flint, light to dark coloured greys and browns. The quality of the raw material is variable ranging from good to poor. The cortex present on the dorsal surface of the pieces ranges from a light to mid-brown colour and generally has a smooth, rolled and weathered surface. The raw material was likely to have comprised terrace and glacio-fluvial deposits.

The flints recovered consist of waste flakes and blades. The assemblage is dominated by flakes which total 92, of which 35 were broken (Fig 5). The remaining flint comprises five blades, of which two are broken (Fig 6). The flakes in the assemblage commonly have unprepared or cortical striking platforms that are relatively long, broad and flat. There are also a number of squat flakes present.

The worked flints are not directly dateable but their technological characteristics suggest a broadly Neolithic to late Neolithic/early Bronze Age date.

Generally there is a slight to medium scatter of worked flint across the proposed development area but no obvious concentrations. Very little worked flint was recovered from the south-eastern edge of the survey area where ground disturbance was noted by the geophysical survey.

#### 4.5 Pottery by Paul Blinkhorn

Pottery ranging from the medieval to modern periods was recovered (Figs 7 to 10, Appendix 2). The following fabrics were noted:

##### **Medieval** (Fig 7)

###### *F324: Brill/Boarstall Ware c AD1200-1600* (Mellor 1994)

Wheel-thrown. Hard buff, orange, pale pink, or yellow-grey fabric, sometimes with fine 'pimply' surface. Rare to common sub-angular to sub-rounded orange, clear and grey quartzite up to 0.5mm, rare subrounded to sub-angular red ironstone up to 1mm. Mottled pale to dark glossy green exterior glaze, often with copper filings.

###### *F333: Hertfordshire Grey ware, mid 12th – 14th centuries* (Turner-Rugg 1993)

Reduced sandy wares, probably from a number of sources, some of which are as-yet unknown).

###### *F337: Hertfordshire Glazed Ware, mid 14th – 15th centuries* (Jenner and Vince 1983)

Salmon-pink sandy fabric, sparse to moderate rounded red ironstone up to 5mm. Bright green copper-spotted glaze.

##### **Late medieval** (Fig 8)

###### *F401: Late Medieval Oxidized ware, mid 15th – 16th centuries*

Very hard orange sandy ware in a range of developed late medieval utilitarian forms, some with a dark green glaze. Numerous kiln sites throughout the south-east midlands, at places such as Glaphorn in Northamptonshire (Johnston 1997).

*F405: German Stonewares, AD1480+*

A range of hard, grey, salt-glazed fabrics produced at numerous sites in the Rhineland and beyond (cf Gaimster 1997).

**Post-medieval (Fig 9)***F410: Anglo-Dutch Tin-glazed Earthenware, 17th – early 18th centuries (Orton 1988)*

Fine white earthenware, occasionally pinkish or yellowish core. Thick white tin glaze, with painted cobalt blue or polychrome decoration. Range of table and display wares such as mugs, plates, dishes, bowls and vases.

*F412: Westerwald/Cologne Stoneware, 17th century + (Gaimster 1997)*

Hard grey fabric with a salt glaze, often with blue and purple painted decoration. Mainly jugs.

*F414: Staffordshire Manganese Mottled Ware, late 17th – 18th centuries*

Hard buff fabric with distinctive purplish-brown glaze. Usually fine drinking pottery, but chamber pots and other more utilitarian vessels also known.

*F425: Red Earthenware, 16th – 19th centuries*

Fine sandy earthenware, usually with a brown or green glaze, occurring in a range of utilitarian forms. Such 'country pottery' was first made in the 16th century, and in some areas continued in use until the 19th century.

*F438: English Stoneware, 1680+*

Hard, grey fabric, often with a brown, iron-rich exterior wash. Range of utilitarian vessels, particularly mugs.

**Modern (Fig 10)***F1000: Miscellaneous 19th and 20th-century wares*

Mass-produced white earthenwares, stonewares, plant-pots etc.

**4.6 Building materials by Pat Chapman*****Ceramic roof tile***

Overall 1236 sherds of ceramic tile, weighing 28.03kg, were collected from 91 squares (Fig 11, Appendix 3). These sherds are small, measuring rarely more than 60x50mm, and most are smaller. They are worn, abraded, and in some cases laminated so that surfaces have been lost.

Plain flat roof tiles of late medieval to post-medieval date form 98% (1211 sherds) of this collection. The sherds are between 10mm and 14mm thick, typically 11-13mm. Only five sherds are curved, four of them are probably valley or hip tiles, whilst one curved sherd is 20mm thick and may be from a ridge tile, from square 59.

There are three fabrics. About half are made from fine hard orange clay, occasionally pinkish or brownish in colour. Another third are made from fine hard sandy orange clay, occasionally reddish or pinkish. The distinction between these two fabrics is not always obvious and at times has probably depended on the vagaries of the mix of the clay. The third fabric is a distinct hard coarse sandy dark red clay, comprising about 10% of the sherds. Just two sherds are completely black, from squares 20 and 85.

There are the remains of 31 round pegholes, only one being complete. Of the 16 pegholes that are measurable the diameters are between 10mm and 16mm. One tile has a square hole 10mm square. There are no nibs associated with these tiles.

Other roof tiles comprise four pantile sherds, having part of the distinct 'S' curve, from squares 11, 29, 77 and 84. Pantiles have been used since the 17th century. There are also seven modern machine-made tiles, which have a uniform smooth purple surface, they are 10mm thick, and one has a peghole 6mm in diameter adjacent to a nib, typical of these tiles. These were found in squares 6, 29, 32, 58, 82 and two from 92. A similar tile from square 27 has the letter 'T' stamped upon it, but the adjacent letters are too damaged to read. This type of modern tile has been produced since the mid 19th century.

### ***Floor tiles***

There are five thicker flat tiles, 18-27mm thick and made in fabrics 1 and 2, which are probably floor tiles, and come from squares 10, 52, 55, 78 and 80.

### ***Pipes and drains***

Just five sherds come from drain pipes. Two of these, in square 51, appear to be from field drains, the remainder comprise one pipe made in white clay, a salt-glazed pipe and one earthenware from squares 13, 32 and 34.

### ***Brick***

There are 126 fragments of brick, weighing 11.2kg, collected from 50 squares (Fig 12, Appendix 4). They are all small, abraded and worn, with only eight being substantial enough to measure thickness: four of those are 33mm and 35mm thick and four 60mm, 63mm and 65mm thick.

The bricks have been made in five fabrics. Nearly half, 56 fragments, are made from a hard coarse granular pinkish-brown clay with a shiny surface, a few with white staining, perhaps from whitewash. About a quarter, 31 fragments, are made with hard coarse sandy dark red clay which has been overfired, with frequent flint and gravel. The remaining quarter comprises 14 fragments made from very fine hard sandy dark red clay; 18 from fine sandy orange clay; and seven from coarse sandy orange clay with gravel and flint.

The most common brick is that of the London Brick Company. Frogs have survived on nine fragments, enabling a thickness of 60-65mm, to be measured, and three frogs still have enough stamp surviving to be recognised:

. . RPRES on one side and . . B C on the other, square 13

. . ORPR . . square 30

. . RES . square 58

The trade-name Phorpres came about because Fletton Bricks made in Bedfordshire were pressed twice in each direction so that they were literally 'four pressed'. If the phrase is pronounced quickly it becomes PHORPRES. LBC on the frog stands for the London Brick Company. The Phorpres bricks date from between the late 19th century until 1974 (<http://www.penmorfa.com/bricks/england4.html>).

The remaining bricks are probably locally made and could have a wide date range. One fragment, from square 58, has a rubbed curved surface of the type often used in door or window arches. From square 20 one brick fragment with a frog also had a header and stretcher with rusticated combing.

The thinner bricks, 33-35mm thick may have been laid for floors or yard surfaces

### ***Cement***

There is little cement surviving, although one brick fragment from square 11, still had Portland cement 10mm thick adhering to one side. A chunk of cement 35mm thick and surviving up to 50mm wide has a fragment of a red brick up to 135mm long attached,

possibly part of an air brick as it has an indentation running along the length of the fragment. An elongated lump of cement comes from square 83, weighing only 38g.

### **Stone**

There are very few stone fragments of any sort (Fig 13, Appendix 5). Five very small fragments of Welsh roof slate, between 2mm and 5mm thick, are probably of 19th century date. The remainder comprise a small slab of black marble streaked white, 20mm thick, possibly from a fireplace and a small lump of granite, weighing 93g.

### **Discussion**

Most of the roof tiles are of a type that lasted from the medieval period to the early 19th century and could have survived from earlier manuring scatters, particularly as the sherds are so small. However, the majority of the bricks are from the 19th and 20th centuries. It seems likely, therefore, that this overall assemblage is post-medieval to modern in date.

## **4.7 Other finds by Tim Upson-Smith**

### **Shell**

Five fragments of oyster shell were recovered during the fieldwalking survey, two pieces from square 75 and one each from squares 20, 71 and 75. This would suggest a small concentration in the western part of the area although as this is not a datable ecofact, it can contribute little to an understanding of the areas history.

### **Clay Pipe**

Three clay pipe stem fragments were recovered, from squares 2, 45 and 75. The narrow bore diameter c 4/64" would suggest a 19th-century date. All of the fragments were abraded and are of little archaeological significance.

### **Slag**

A single piece of metal working slag was recovered from square 90.

### **Hone stone**

A fragment of a hone stone was recovered from square 73. It is of oval section fine grained stone and broken at either end. Its oval section would suggest that it is probably post-medieval in date.

### **Iron Objects**

Three iron objects were recovered during the fieldwalking survey. They comprise a horse-shoe from square 45 and two unidentified objects, from squares 66 and 76. Again the objects contribute little to the analysis of the site.

### **Glass**

Forty-one fragments of bottle glass and five fragments of window glass were recovered during the survey. The bottle glass is 18th century and later, the bulk of it being 19th/20th century in date. The window glass is modern. Also recovered was a complete miniature glass milk bottle from a child's dolls house or toy shop.

## **4.8 Discussion**

The most notable finds are two Palaeolithic handaxes which are thought to represent part of a wider distribution of such artefacts that are associated with the Colne and Ver

river valleys. Hence, although of intrinsic interest the handaxes do not necessarily have significance for the assessment area itself.

There is a general distribution of later prehistoric worked flint throughout the majority of the site, indicating general prehistoric activity in the area. There do not appear to be any significant concentrations within the distribution although there is an apparent absence of such finds immediately to the west of the A405 road.

No Roman pottery or tile was recovered during the fieldwalking possibly suggesting that the area was not utilised in this period, perhaps being either wooded or marginal land.

The earliest pottery recovered dated from the medieval period. It comprised only seven sherds, and is likely to derive from manuring practices. The principal findspots for this material lie to the north of Holt Farm. The small number of sherds is interesting given the proximity of the two possible medieval settlements at Daneswick and Holt Farm.

Later pottery and tile is also likely to have derived from manuring practices. The late medieval pottery assemblage comprises only three sherds which were retrieved from the north-west of Holt Farm.

The post-medieval and modern pottery assemblages are larger and have a wider distribution throughout the assessment area. Post-medieval and modern brick and tile proved to be the most numerous artefact types. The retrieval of post-medieval pottery from the east of the site suggests that the ground disturbance observed by the geophysical survey (see Section 5) is not necessarily masking earlier finds.

## **5 GEOPHYSICAL SURVEY**

### **5.1 Methodology**

The geophysical survey was conducted with Bartington Grad 601-2, twin sensor array, vertical component fluxgate gradiometers (Bartington and Chapman 2003). These are standard instruments for archaeological survey and can resolve magnetic variations as slight as 0.1 nanoTesla (nT). All instrumentation and fieldwork methods complied with the guidelines issued by English Heritage and by the Institute for Archaeologists (EH 2008; Gaffney, Gater and Ovendon 2002).

Due to its size and irregular shape, the survey area was broken down into five conveniently sized units. A separate base-line was established in each, forming the basis of a network of 30m grid squares. These squares were set-out manually, by tape measure and optical square, but were tied into the OS National grid by measurements taken with a Leica System 1200 dGPS.

The gradiometers were carried at a brisk but steady pace through each grid square, collecting data along 1.0m spaced traverse lines. Measurements were automatically triggered every 0.25m along the traverses, giving a total of 3600 measurements per grid.

The survey data was processed using Geoplot 3.00u software. Striping, caused by slight mismatches in sensor balance, was removed using the 'Zero Mean Traverse' function and destaggering of the data was performed as necessary.

The processed data is presented in this report in the form of grey-tone plots. Most plots have been produced at a scale of +/- 4nT (black/white), but an overview plot at a wider scale (-/+ 10nT) has also been produced. All of these have been scaled, rotated and resampled (georectified) for display against the Ordnance Survey base mapping (Figs 15-23). Interpretative overlays have been produced (Figs 18, 20, 22 and 23) and the key for these is presented as Fig 14.

No stacked trace plots have been produced for this site, as the very large survey area and the substantial areas of intense magnetic noise make such a display method impractical.

## 5.2 Results

### ***Archaeology***

The survey has identified only a few anomalies of potential archaeological interest. One small group of these occurs at the far eastern end of the field, just south of Noke Lane, and isolated examples occur elsewhere. Most of the anomalies are fragmentary and magnetically weak; in some places they are also partly obscured by later disturbance. These factors make any firm interpretations difficult.

There are four anomalies of note to the south of Noke Lane (Figs 17 and 18). The first two are weakly positive curvilinear anomalies, which together appear to define an arc with a projected diameter of c 40m (A1).

Slightly further south there is a positive linear anomaly, c 30m long, which probably represents a short length of buried ditch (A2). Immediately to the east of this is a very slight and tenuous circular anomaly, c 7m in diameter (A3). The identification of this feature is very uncertain.

Towards the southern edge of the site, at TL 1244 0330, there is an ovoid anomaly with an average diameter of c 20m (A4).

Elsewhere in the data there are a number of short positive linear anomalies which may represent sections of infilled ditch. These are very disjointed and widely scattered, so it is not possible to offer any meaningful discussion of their significance. There is also one discrete positive anomaly (A5), close to the western end of the site, which would be consistent with a large pit (Figs 19 and 20).

Although the above anomalies may represent archaeological features none can be interpreted with particular confidence, as they are represented by generally weak magnetic responses and are partially obscured by magnetic disturbance.

Finally, it is worth making note of the pronounced lynchet which survives in the eastern part of the site (A6)(Fig 18). In places this stood c 1.5-2m high and was too steep to be surveyed across (hence the small gaps in the data). Where survey was possible, across the lower parts of this earthwork, it was found that its line was marked by a dense concentration of small magnetic dipoles. This probably reflects a casual process of field clearance, whereby various items of ferrous scrap and other debris have accumulated along its length.

### ***Geology***

There are a large number of diffuse and irregular linear anomalies in the western and northern parts of the survey area, as well as some zones of ill defined background patterning. These probably reflect compositional or structural patterns in the underlying geological sediments but, for the most part, they defy any more specific interpretation. The one exception is the broad linear trend which runs north-eastwards towards Keeper's Lodge (G1). This correlates with a small dry valley, and may indicate an accumulation of colluvium in its base (Figs 19 and 20).

Many of the discrete positive anomalies in the data are also thought to have a geological origin. A group of particularly large and amorphous examples (G2) occurs south of the westernmost electricity pylon (Figs 20-22), and other groups are scattered across the land to the south and west of Holt Farm. It is conceivable that some of these anomalies



represent humanly dug pits, but they are more likely to indicate infilled solution hollows, tree-throw pits or other naturally formed sub-surface features.

### ***Magnetically disturbed zones***

A large part of the survey area, amounting to roughly 20ha, is dominated by extremely strong magnetic responses of various types. Many of these are arranged into coherent groups and patterns, which suggests that a human, rather than natural, origin is likely. A fully detailed interpretation is not possible, but some general observations can usefully be made.

When the survey data is closely studied, the 'noise' can be broken down into a number of different zones and anomaly types (Fig 23). Most fundamentally, a distinction can be made between those areas where clear and discrete anomalies occur and those where the anomalies are closely packed or overlapping. It is likely that the discrete anomalies relate to well defined features, such as pits or trenches, whilst the less coherent noise represent areas where there is a general accumulation of magnetic material, either as a spread or as fills within a dense cluster of intercutting features.

The discrete features can be broadly sub-divided according to their trace-form and magnetic intensity. Some are moderately magnetic (c 10-50nT) and have generally smooth trace forms. Others are rather more magnetic (typically up to 200nT), and some are very highly magnetic (>1000nT), often with very sharply peaked trace-forms. As a rule, the first type are most likely to be 'thermo-remnant' anomalies (ie caused by burnt soil or ceramic materials such as brick), whereas the last will tend to be ferrous in origin. The middle category are harder to interpret, and could indicate either thermo-remnant features or concentrations of ferrous material buried at depth.

A similar variation in anomaly strength can be discerned within the areas of more intense noise, as has been indicated on Figure 23. The same interpretive principle applies, that the most highly magnetic areas are likely to contain a substantial quantity of ferrous material, whereas the remainder could contain more burnt material and/or ceramics. Another distinction can be made between those areas containing generally large anomalies and those where the anomalies are much smaller, giving the data a 'speckled' appearance. The latter, which are concentrated around the edge of the field, and often lie close to buildings, probably indicate ephemeral deposits of hardcore or else agricultural or domestic debris. They need not be related to the other areas of disturbance.

Considered as a whole, the magnetic disturbance seems much too extensive and too structured to have anything other than modern origin. It may relate to groundworks associated with the construction of the M25 or, less probably, could suggest a wartime decoy site or some other temporary military facility. Further documentary research or local enquiry may be able to provide a more conclusive explanation of its cause.

### ***Services***

The data contains four linear anomalies, each of which is composed of an alternating chain of magnetic dipoles. This type of anomaly is particularly diagnostic, with each one indicating the presence of a small pipeline. One of them (P1) crosses the site in a straight line between Holt Farm and Noke Farm and another (P2) runs close by this to the south (Figs 18 & 20). The third (P3) follows a north-south course slightly to the west of the easternmost electricity pylon and the fourth (P4), which survives only as fragments, follows the western edge of the track to Holt Farm.

A set of electricity wires, supported by three pylons, crosses the site from south-east to north-west (Figs 18 & 20). Large magnetic halos (E1-E3) surround each of the pylons, and there is a narrow strip of bland data (E5) between the central and western pylons,

where the wires hung low enough for the current to interfere electromagnetically with the survey instruments.

Immediately to the north-west of the eastern pylon, and directly underneath the line of the wires, there are four large ferrous anomalies in a square configuration (E4). It seems very likely that these indicate the buried footings of a former electricity pylon (Fig 18).

### ***Miscellaneous***

At various points around the edge of the data there are magnetic halos arising from adjacent buildings and fences. These do not merit individual discussion. Also, along the southern edge of the site, there are two narrow strips of magnetic disturbance (T1 & T2) where the survey extended across a modern farm track and detected accumulations of hardcore within its make-up (Figs 18 & 20).

The data plots also contain some faint and narrow white lines which are simply edge effects, where separate blocks of processed data have been joined to produce a complete greyscale plot. They are of no significance, and can be disregarded.

## **6 CONCLUSION**

The fieldwalking survey retrieved artefacts dating from the Palaeolithic to the present day. Aside from the intrinsic interest of the two Palaeolithic handaxes, the other artefacts appear unremarkable. The distribution of later worked flint appears to show general activity across the assessment area but the range of types is limited with the vast majority being unutilised flakes. There is no evidence from the fieldwalking of further activity on the site until the medieval period, however some ephemeral curvilinear anomalies detected by the geophysical survey at the east of the assessment area may represent the vestigial remains of pre-medieval ditches and ditched enclosures.

The pottery from the medieval period probably derives from manuring practices. However, the small quantity of material from this and the late medieval period may suggest that the extent of arable cultivation was limited. Certainly, the pottery, tile and other material from the post-medieval and modern periods is more extensive and this may suggest either the presence of disturbed ground or extensive manuring in these later periods.

That there is considerable ground disturbance in the eastern half of the assessment area is attested by the geophysical survey. This supported the results of the fieldwalking by suggesting that large quantities of magnetic debris, probably including ferrous objects, ceramic building material and burnt soil, have been deposited here and that some of this material may be concentrated in the backfill of pits and trenches. The precise date of this disturbance is unknown, but one possibility is that it relates to the construction of the adjacent motorways.

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18 February 2011

## Appendices

### Appendix 1: Worked flint quantification by collection unit

Square	Flakes	Blades	Handaxes
11	1	0	0
14	3	0	0
15	1	0	0
17	2	0	0
18	1	0	0
20	3	0	0
22	2	0	0
27	1	0	0
30	1	0	0
32	1	0	0
33	2	0	0
34	2	0	0
35	2	0	0
36	3	0	0
38	1	0	0
41	1	0	0
43	3	0	0
45	3	1	0
46	1	0	0
48	2	0	0
50	1	0	0
51	3	0	0
52	3	1	0
56	2	0	0
57	4	0	0
58	1	0	0
59	0	0	0
61	2	0	0
62	1	0	0
64	2	0	0
66	1	0	0
68	1	0	0
69	1	0	0
70	2	0	0
72	3	0	0
74	0	0	1
75	3	0	0
76	2	0	0
78	1	0	0
79	4	0	0
81	2	0	0
82	1	0	0
83	1	0	0
84	2	0	0

Square	Flakes	Blades	Handaxes
85	2	0	0
86	3	0	0
87	1	0	0
88	0	0	1
89	4	1	0
90	0	1	0
92	1	0	0
93	2	1	0
94	1	0	0
97	4	0	0
<b>TOTALS</b>	<b>97</b>	<b>5</b>	<b>2</b>

## Appendix 2: pottery quantification by collection unit

Square	No	weight (g)	Fabric
1	1	3	1000
3	1	19	425
3	2	35	425
3	1	2	1000
3	1	4	1000
6	1	21	425
6	1	41	438
9	1	10	1000
11	1	30	425
11	1	2	1000
12	2	6	1000
13	2	14	1000
15	1	17	425
15	1	2	1000
16	1	7	425
17	2	9	425
17	2	18	1000
18	1	4	1000
20	1	9	438
20	4	29	1000
21	5	14	1000
22	1	1	1000
23	2	25	1000
24	1	5	324
24	3	16	425
24	1	7	438
24	12	37	1000
25	1	8	1000
26	1	4	1000
27	1	1	1000
28	1	1	425
29	1	1	1000
30	1	11	425
30	2	5	1000
31	1	6	425
31	2	10	1000
32	1	1	1000
33	1	9	414
33	1	3	438
33	2	14	1000
33	6	16	1000
34	2	29	425
34	1	29	438
34	1	1	1000
36	1	1	414

Square	No	weight (g)	Fabric
36	5	15	1000
37	4	78	425
37	1	3	1000
38	1	1	1000
39	1	2	1000
41	1	8	425
44	2	13	1000
45	2	20	425
45	4	45	1000
46	1	17	425
47	5	18	1000
49	2	13	1000
51	1	49	1000
52	1	5	425
52	2	14	438
54	1	4	412
54	1	2	1000
55	2	43	425
55	1	7	438
56	3	18	1000
59	1	10	1000
60	1	13	1000
61	1	8	337
61	4	16	1000
62	1	7	425
62	1	2	1000
63	2	22	425
63	2	17	1000
64	1	6	1000
67	2	11	425
68	1	20	1000
69	1	3	425
70	1	4	425
71	1	1	1000
72	5	71	425
72	4	11	1000
74	1	3	401
74	1	1	1000
75	2	29	425
75	1	5	1000
76	1	4	405
76	1	4	425
77	2	7	1000
78	1	9	425
78	1	3	1000

Square	No	weight (g)	Fabric
80	1	5	1000
81	1	36	425
82	3	26	1000
83	1	4	425
84	1	4	425
84	2	49	438
84	3	13	1000
85	1	5	333
85	2	30	337
85	1	10	1000
86	8	109	1000
87	1	16	425
87	1	1	1000
88	3	73	410
88	3	17	1000

Square	No	weight (g)	Fabric
89	1	2	333
89	1	14	401
89	1	19	425
89	22	84	1000
90	1	4	333
90	2	29	425
90	1	14	438
90	5	62	1000
91	10	50	1000
92	3	72	425
93	2	69	425
93	3	19	1000
96	2	11	1000
97	3	15	1000
<b>TOTALS</b>	<b>250</b>	<b>2061</b>	

## Appendix 3: Tile quantification by collection unit

Square	No	weight (g)	F1	F2	F3	pegholes no/mm	Comments
1	6	215	5	1	-		
2	2	83	1	1	-		
3	4	108	2	-	1		1 modern
6	6	200	3	2	-		1 modern
8	3	72	-	1	2	1/-	
10	12	300	5	6	1		1 floor tile 18mm thick
11	17	365	10	6	1		1 pantile
12	1	36	1	-	-		
13	6	490	2	3	-		1 modern drain
14	7	190	4	3	-		
15	4	126	4	-	-		
16	3	92	2	1	-		1 curved
17	10	130	6	4	-		
18	7	165	4	3	-		
19	0	0	0	0	0		NO FINDS
20	9	69	6	3	-		1 black
21	15	435	8	4	3	1/-	
22	3	104	2	1	-		
23	5	80	3	2	-		
24	19	446	10	6	3		
25	4	62	2	1	1		
26	6	68	3	2	1		
27	9	170	4	4	1		
28	7	147	7	-	-		
29	6	138	2	3	1		1 pantile, 1 modern
30	12	290	5	6	1	1/15	
31	5	95	1	3	1		
32	7	190	5	1	-		1 white pipe 18mm thick
33	6	167	5	1	-		
34	8	243	6	2	-		1 pipe 18mm thick
35	13	370	6	7	-		
36	15	275	6	8	1		
37	24	455	14	8	2	1/10	
38	4	15	2	2	-		
39	1	21	-	-	1		
40	20	405	6	8	6		
41	12	100	8	4	-		
43	17	368	14	-	3		
44	11	285	6	-	5		
45	20	300	9	11	-	1/12	
46	10	260	3	7	-		
47	16	380	7	4	5	Square, 10	

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Square	No	weight (g)	F1	F2	F3	pegholes no/mm	Comments
48	4	166	2	2	-	1/-	
49	8	200	1	6	1		
50	15	465	9	3	3	2/-	
51	16	490	4	11	1	1/12	2 field drains
52	21	500	15	3	3		1 floor tile 20mm thick
53	11	187	7	3	1		
54	10	185	5	3	2		
55	10	460	3	6	1	1/13	1 floor tile 27mm thick
56	19	445	7	12	-		
57	7	205	3	2	2		
58	4	67	1	-	2		1 modern
59	10	310	8	2	-	1/-	1 20mm thick, curved
60	6	136	2	3	1		
61	14	310	13	-	1	1/13	
62	8	175	5	3	-		
63	21	460	21	-	-		
64	21	595	5	13	3		
65	1	40	1	-	-		
66	16	294	7	8	1		
67	8	185	8	-	-		
68	3	92	3	-	-	1/10	
69	5	75	2	2	1		
70	5	190	2	3	-		
71	1	28	1	0	-		
72	16	300	8	8	-	1/10	
73	2	34	-	2	-		
74	5	112	3	2	-		
75	19	405	18	1	-		
76	18	245	5	13	-		
77	23	618	5	9	9		1 pantile; 1 curved
78	41	695	12	21	8	1/-	1 floor tile 22mm thick
79	34	940	9	18	7	2/-	
80	132	3313	71	53	8	3/12; 1/15 1/16; 2/-	1 floor tile 20mm thick
81	22	565	12	9	1		
82	7	150	4	2	-		1 modern
83	79	1150	31	46	2	1/15	1 curved
84	18	500	4	7	7		1 pantile; 1 curved
85	56	987	28	23	5	1/-; 1/12	1 curved; 1 black
86	13	300	3	8	2	1/-	
87	6	115	-	6	-		
88	4	119	4	-	-		1 curved
89	7	115	6	1	-		



## ST ALBANS, J21 M25

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Square	No	weight (g)	F1	F2	F3	pegholes no/mm	Comments
90	13	430	7	4	2	1/15	
91	8	150	4	4	-		
92	32	650	9	14	7	1/15	2 modern - nib and peg
93	21	375	9	5	7		
94	12	279	9	2	1		
96	14	360	8	5	1	1/-	
97	18	350	18	-	-		
<b>Totals</b>	<b>1236</b>	<b>28027</b>	<b>621</b>	<b>477</b>	<b>130</b>		

## Appendix 4: Brick quantification by collection unit

Square	No	weight (g)	F1	F2	F3	F4	F5	Comment
1	1	42	-	-	-	1	-	
2	1	34	1	-	-	-	-	
8	1	15	1	-	-	-	-	
9	2	237	1	-	1	-	-	35mm thick, floor
10	15	1075	12	1	-	2	-	65mm thick, frog
11	6	1063	4	1	-	-	1	frog
13	7	1688	4	1	2	-	-	63mm thick frog, RPRES/BC
14	1	508	1	-	-	-	-	frog
15	1	54	-	1	-	-	-	
17	1	37	-	1	-	-	-	
18	1	345	1	-	-	-	-	60mm thick, frog
19	0	0	0	0	0	0	0	NO FINDS
20	3	223	3	-	-	-	-	frog
21	1	98	-	-	1	-	-	
22	1	35	-	-	-	1	-	
23	1	10	1	-	-	-	-	
24	2	103	-	2	-	-	-	
27	1	194	1	-	-	-	-	
29	1	108	-	1	-	-	-	
30	4	354	2	1	-	1	-	frog, ORPR
31	2	22	1	1	-	-	-	
32	3	280	3	-	-	-	-	frog
34	1	62	-	1	-	-	-	
35	2	90	2	-	-	-	-	
37	2	139	1	1	-	-	-	
39	2	107	2	-	-	-	-	
43	1	100	-	1	-	-	-	
45	2	250	2	-	-	-	-	
47	3	250	-	1	-	2	-	
49	1	27	-	1	-	-	-	
52	3	20	-	-	-	-	3	
54	2	13	-	2	-	-	-	
55	1	113	-	-	1	-	-	33mm thick, floor
56	1	33	1	-	-	-	-	
58	13	765	7	5	-	1	-	65mm thick, frog, RES
59	2	87	-	-	-	2	-	
60	1	98	-	-	-	1	-	
62	5	285	4	1	-	-	-	
63	1	70	-	1	-	-	-	
70	1	25	-	-	-	1	-	
72	1	21	-	1	-	-	-	

## ST ALBANS, J21 M25

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Square	No	weight (g)	F1	F2	F3	F4	F5	Comment
73	1	34	-	1	-	-	-	
74	1	4	-	1	-	-	-	
75	2	40	-	2	-	-	-	
78	4	110	-	1	1	2	-	
80	5	1400	-	1	3	1	-	35mm thick, floor
83	4	78	-	-	2	1	1	
85	5	342	1	-	1	2	1	
86	2	87	-	-	2	-	-	
91	1	19	-	-	-	-	1	
<b>Totals</b>	<b>126</b>	<b>11194</b>	<b>56</b>	<b>31</b>	<b>14</b>	<b>18</b>	<b>7</b>	

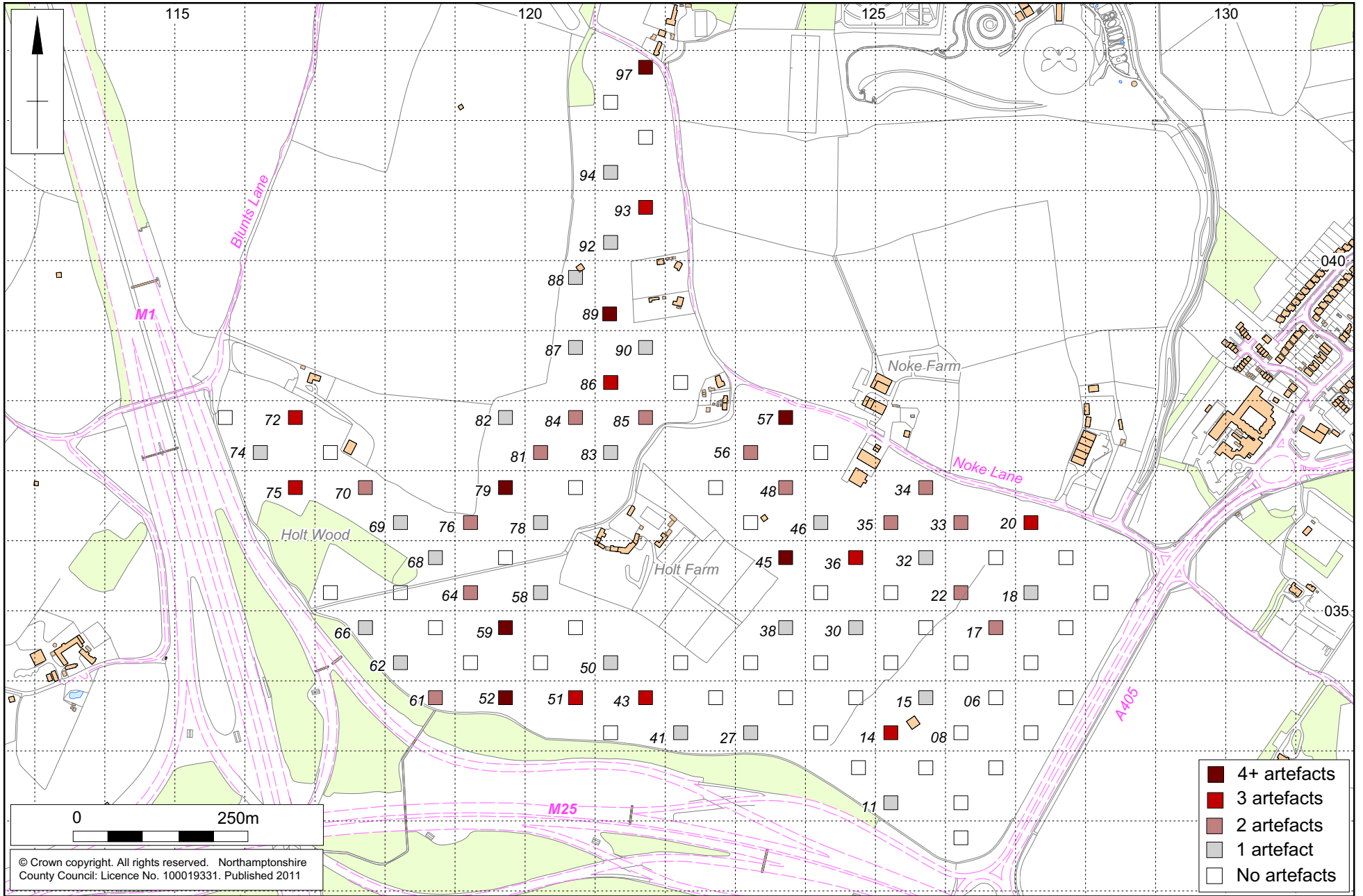
*Appendix 5: Stone quantification by collection unit*

<b>Square</b>	<b>No</b>	<b>Comment</b>
<i>Welsh slate</i>		
<b>13</b>	1	3mm thick
<b>45</b>	1	2mm thick
<b>53</b>	1	5mm thick
<b>85</b>	1	2mm thick
<b>94</b>	1	2mm thick
<i>Other stone</i>		
<b>46</b>	1	Marble (130x70)x20mm
<b>75</b>	1	Granite, 93g
<b>TOTALS</b>	<b>7</b>	

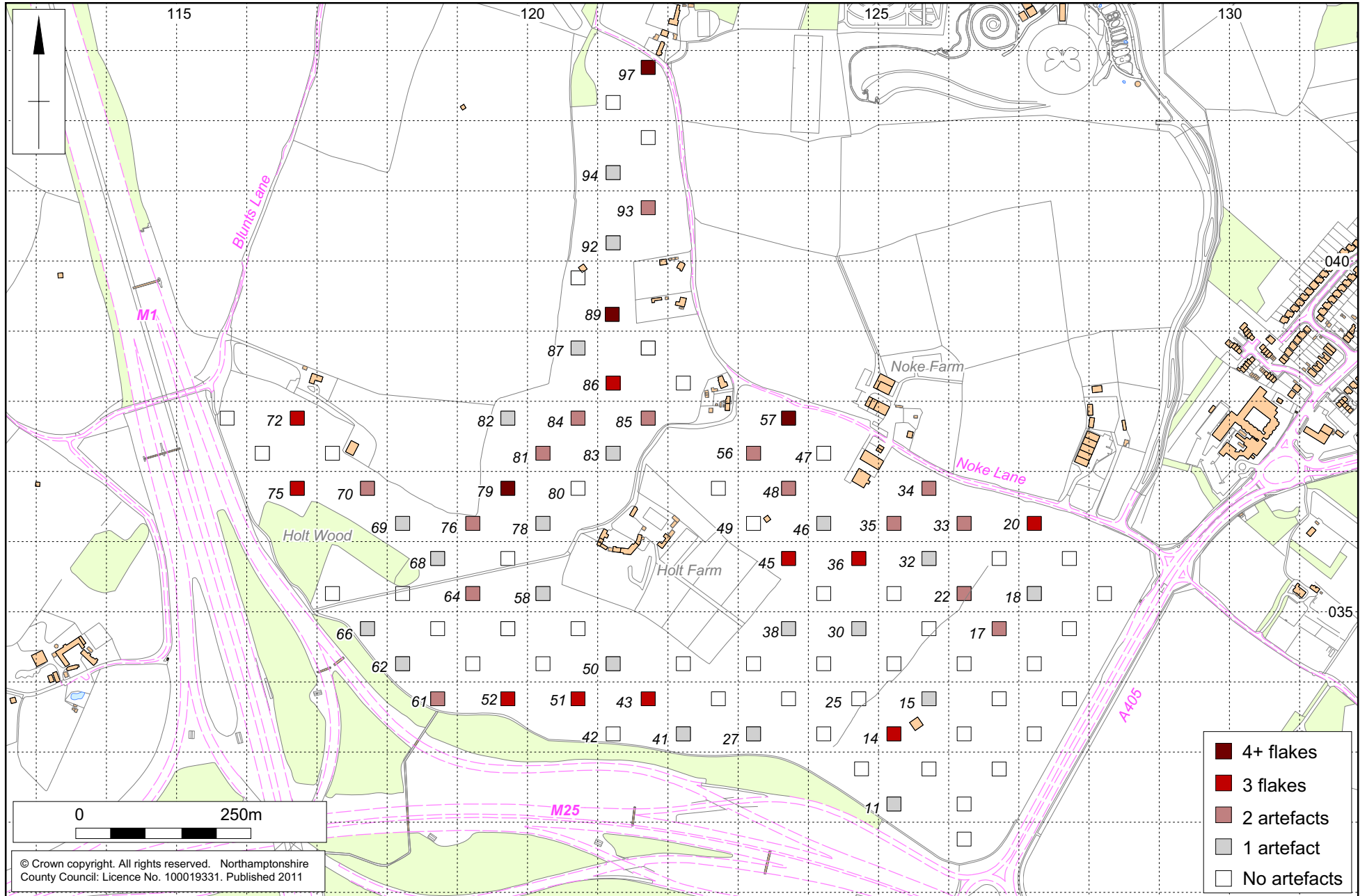
Scale 1:7,500 (A4)

Distribution of worked flint

Fig 4



Scale 1:7,500 (A4)



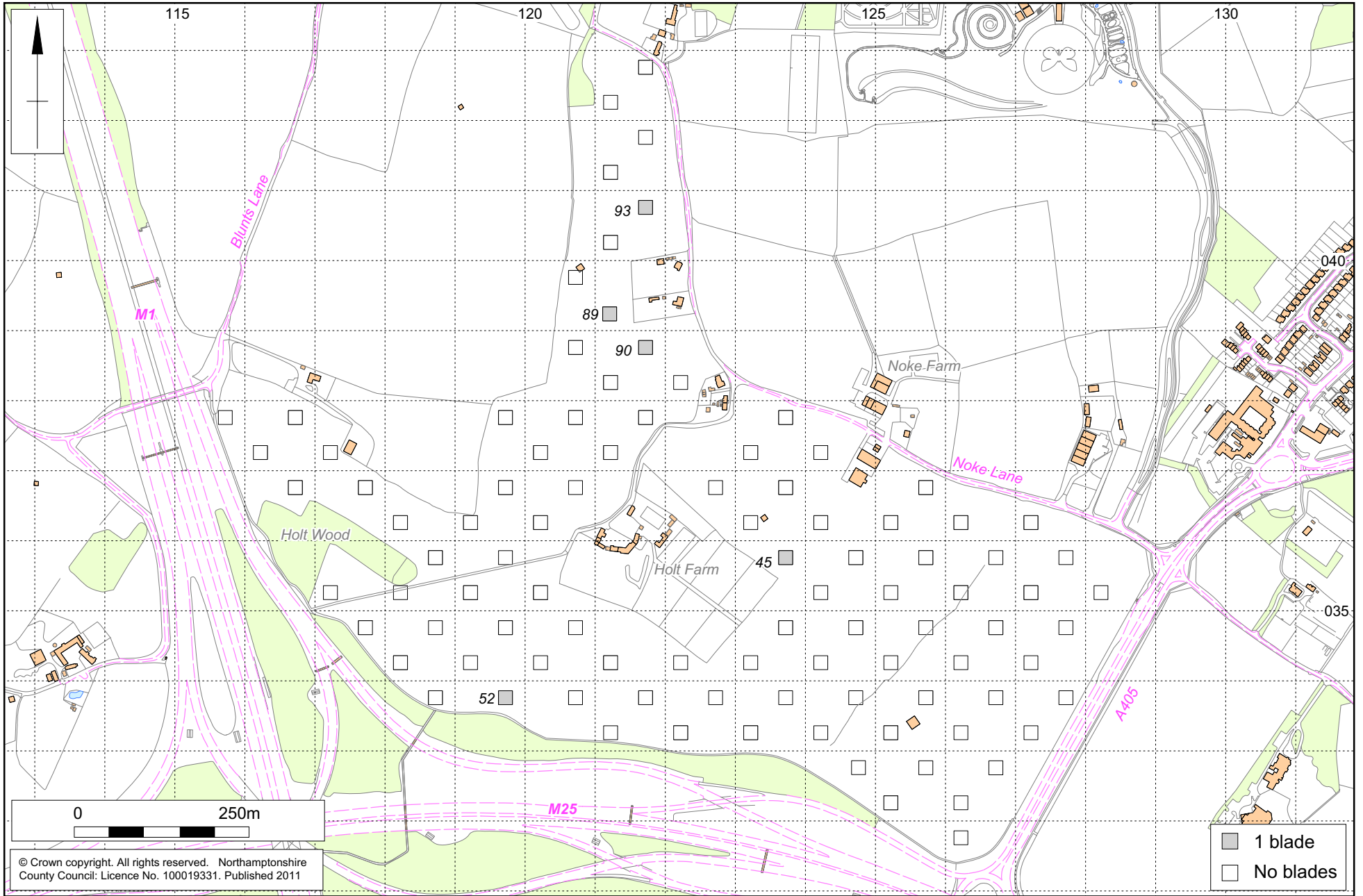
Distribution of flint flakes Fig 5

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Scale 1:7,500(A4)

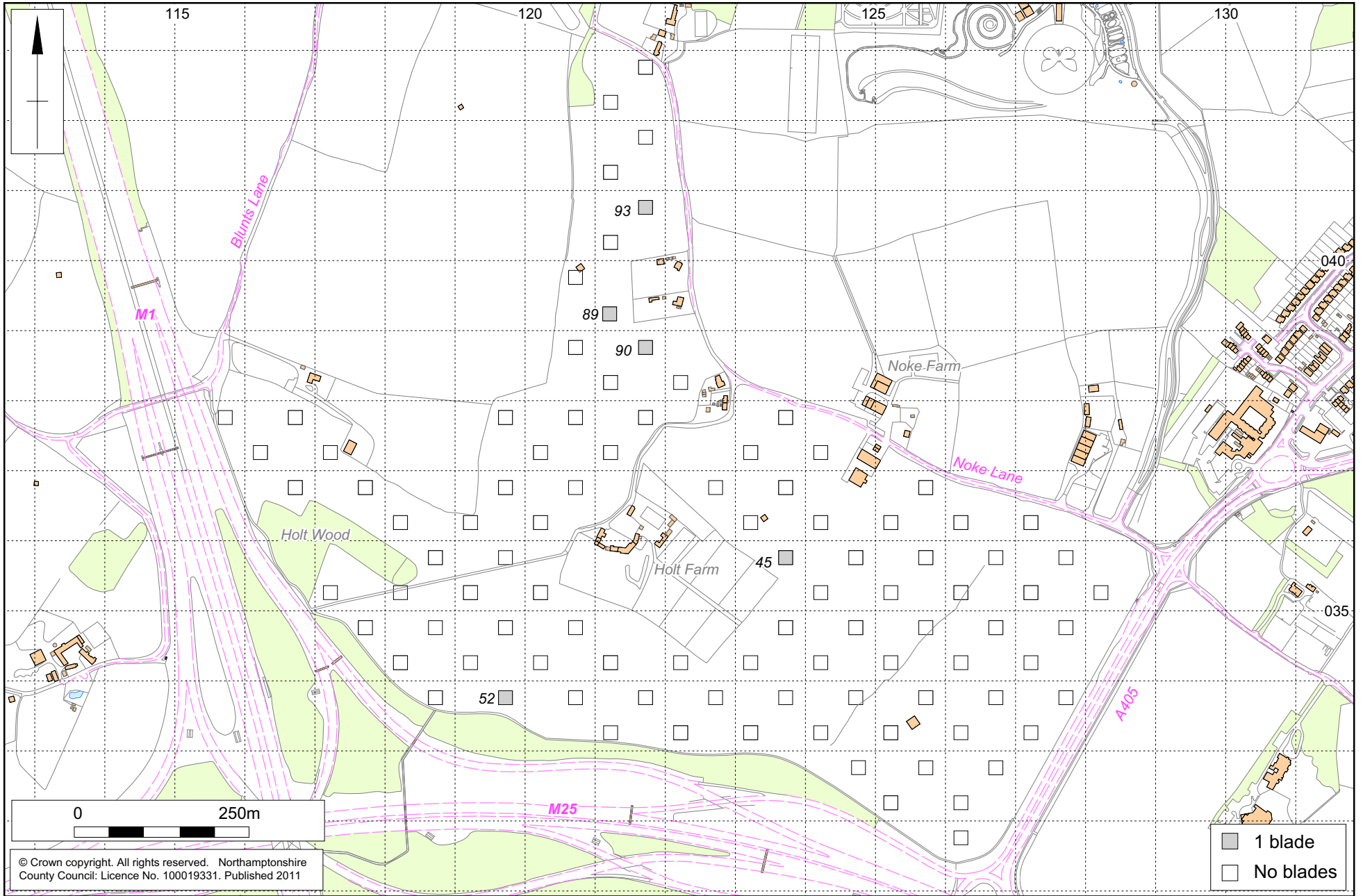
Distribution of flint blades

Fig 6



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Scale 1:7,500(A4)



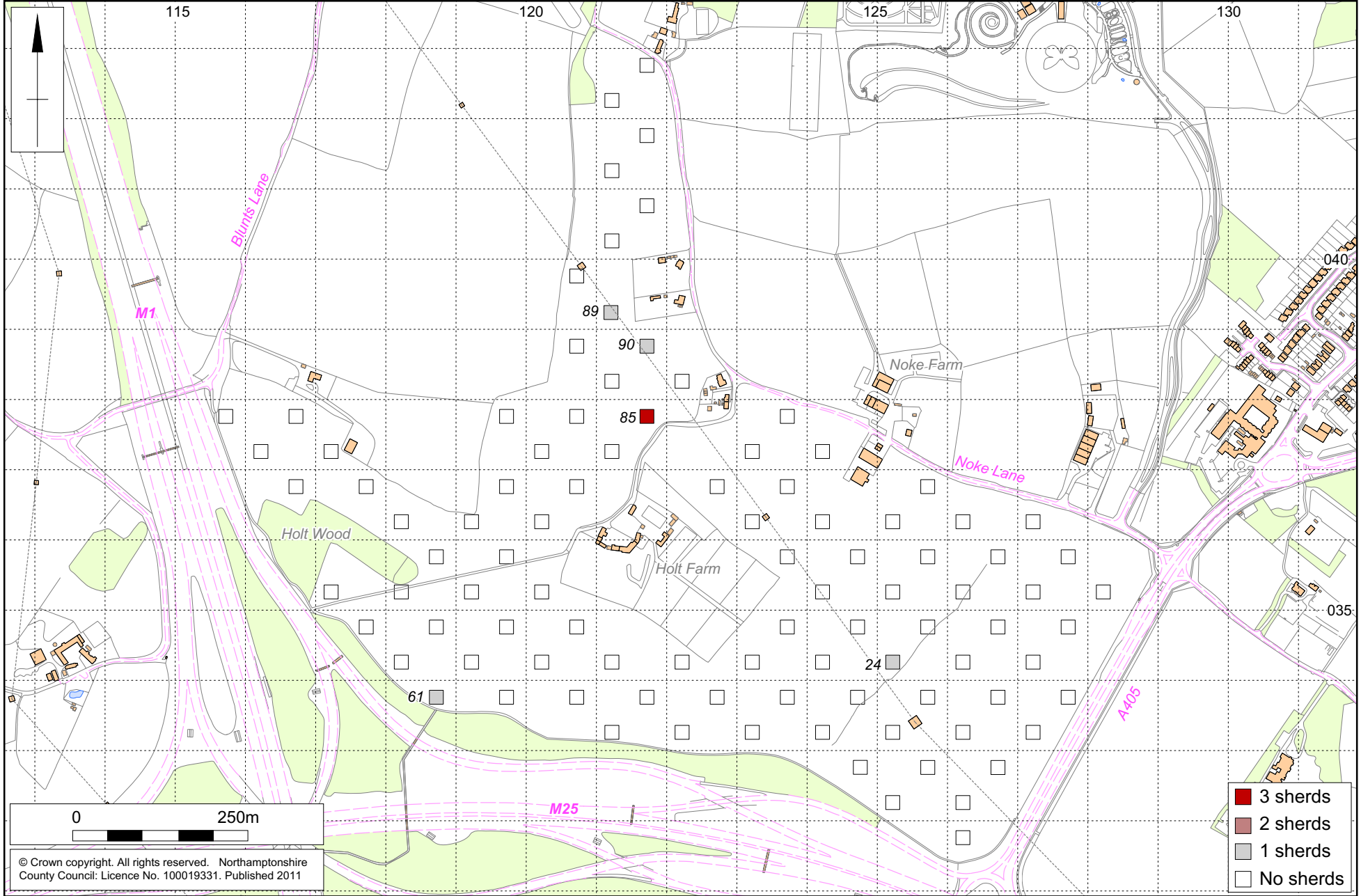
Distribution of flint blades

Fig 6



Scale 1:7,500 (A4)

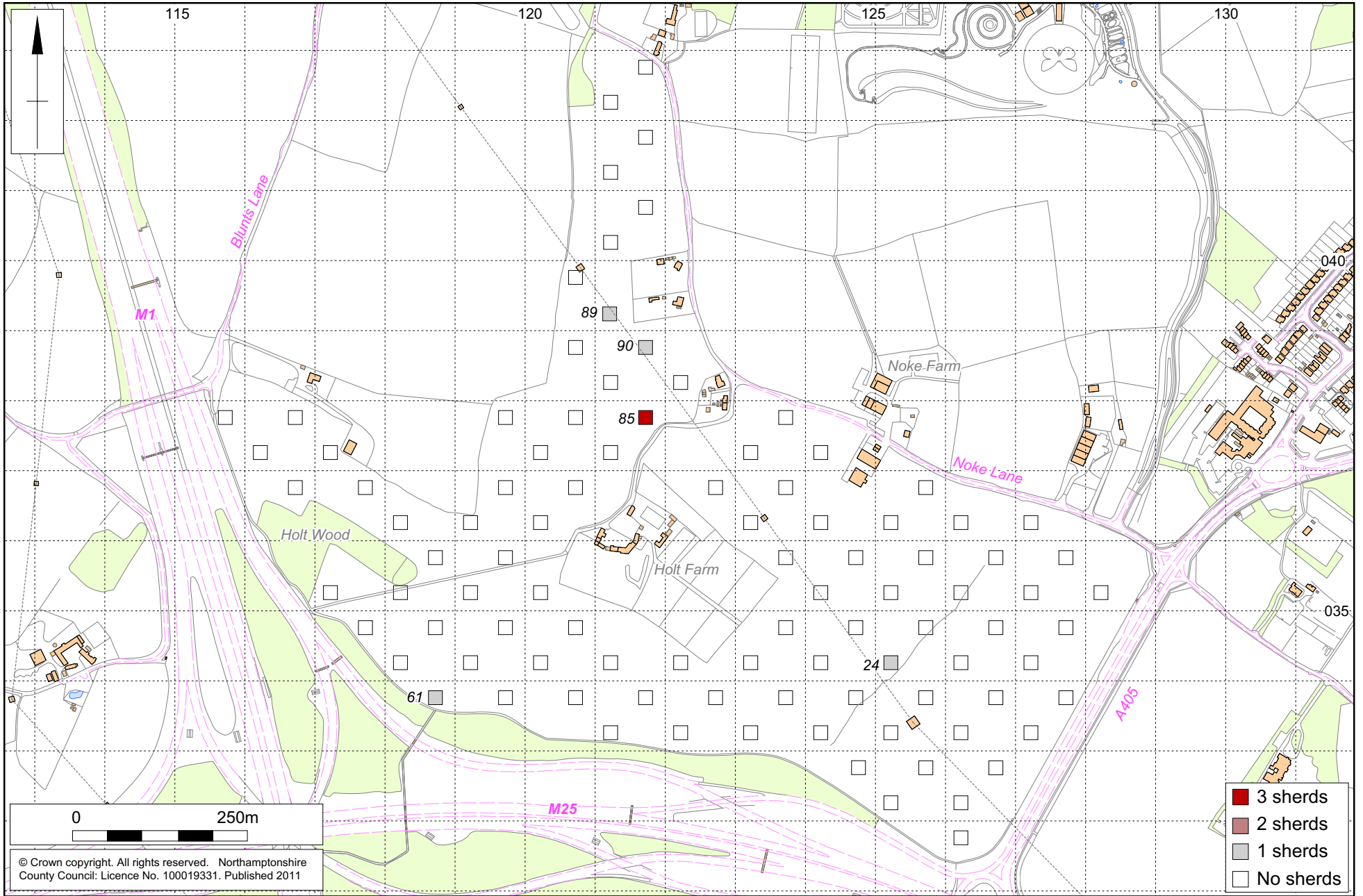
Distribution of medieval pottery Fig 7



Scale 1:7,500 (A4)

Distribution of medieval pottery

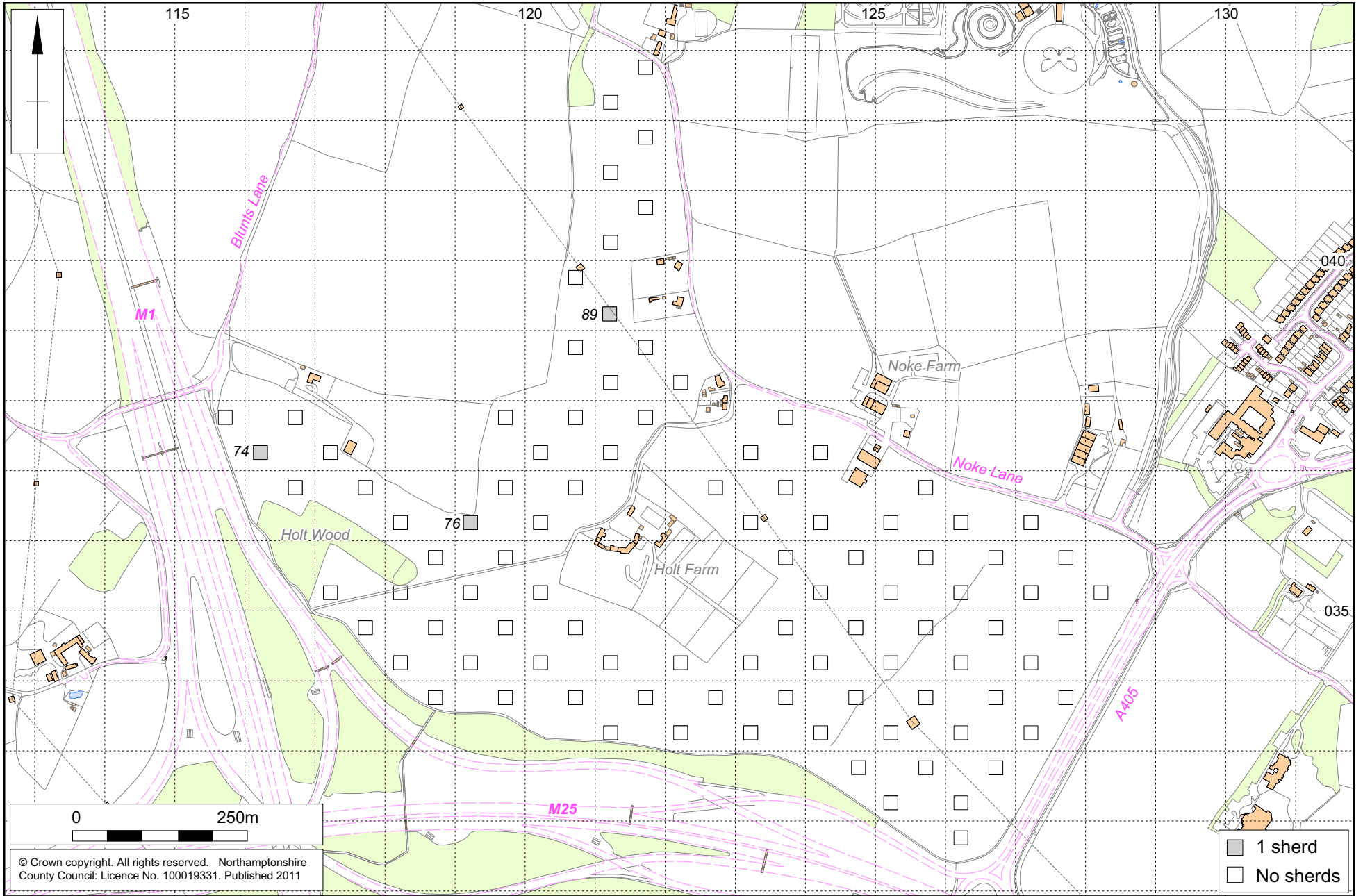
Fig 7



Scale 1:7,500 (A4)

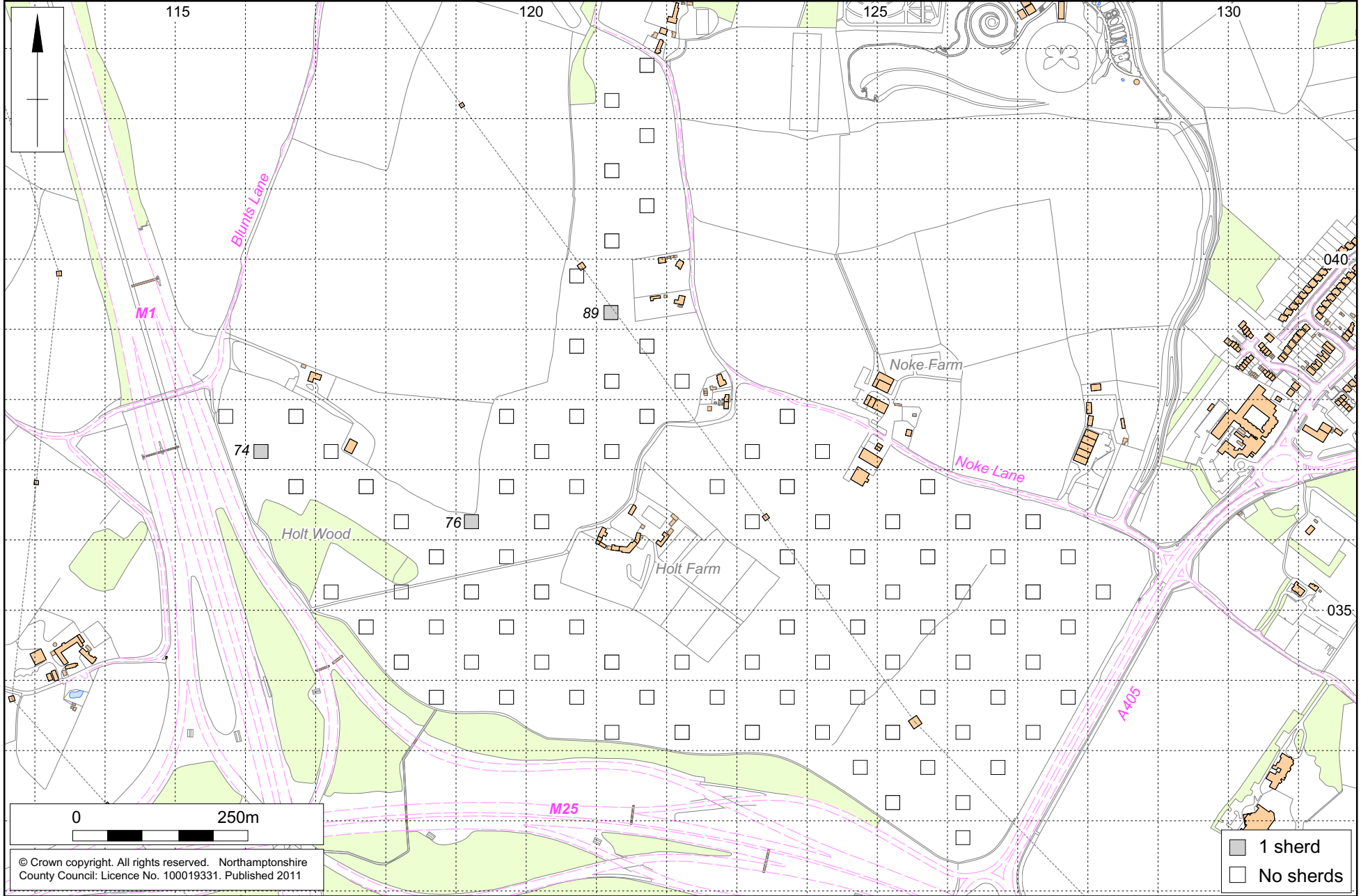
Distribution of late medieval pottery

Fig 8



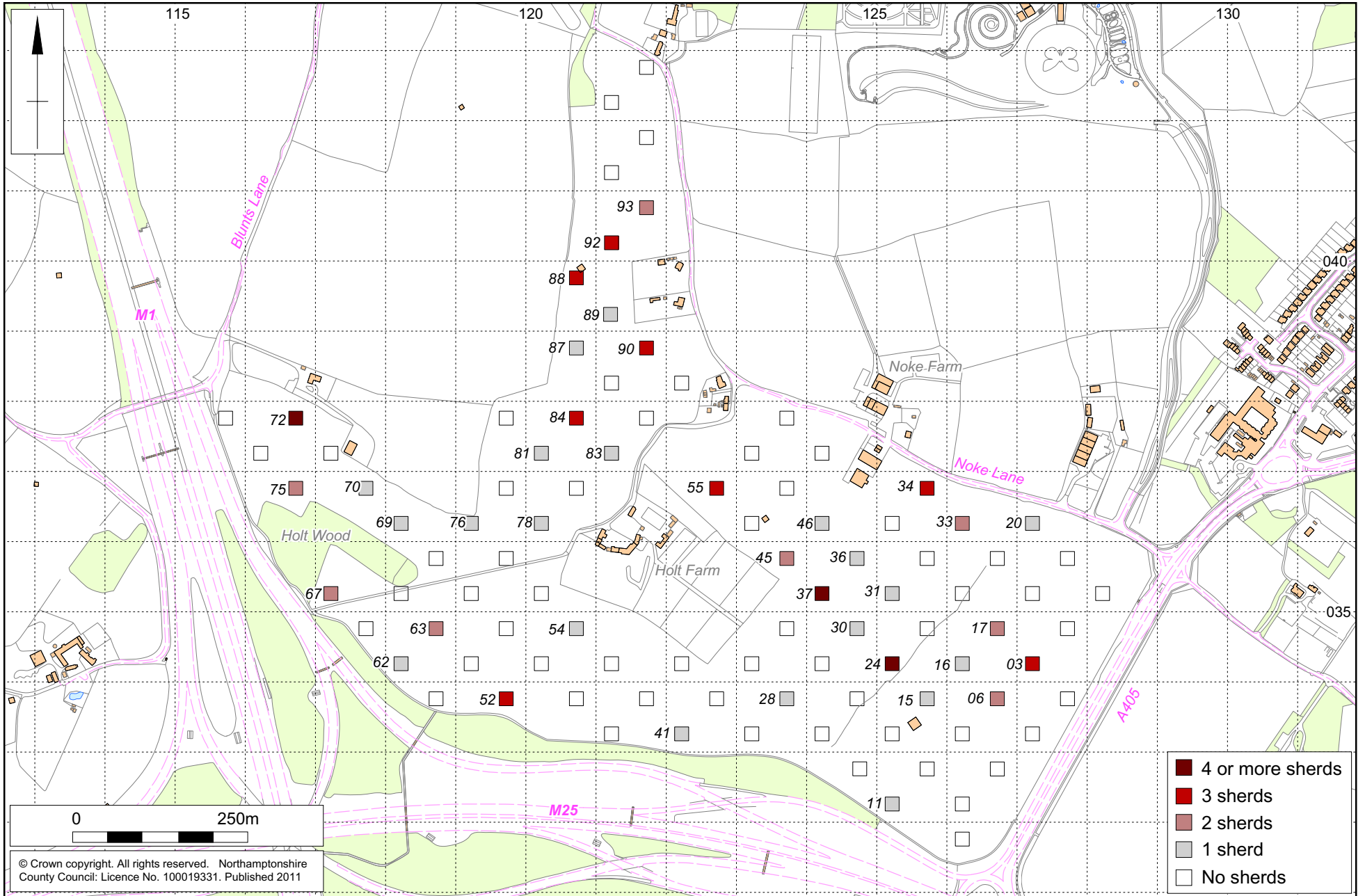
Scale 1:7,500 (A4)

Distribution of late medieval pottery Fig 8



Scale 1:7,500 (A4)

Distribution of post-medieval pottery Fig 9

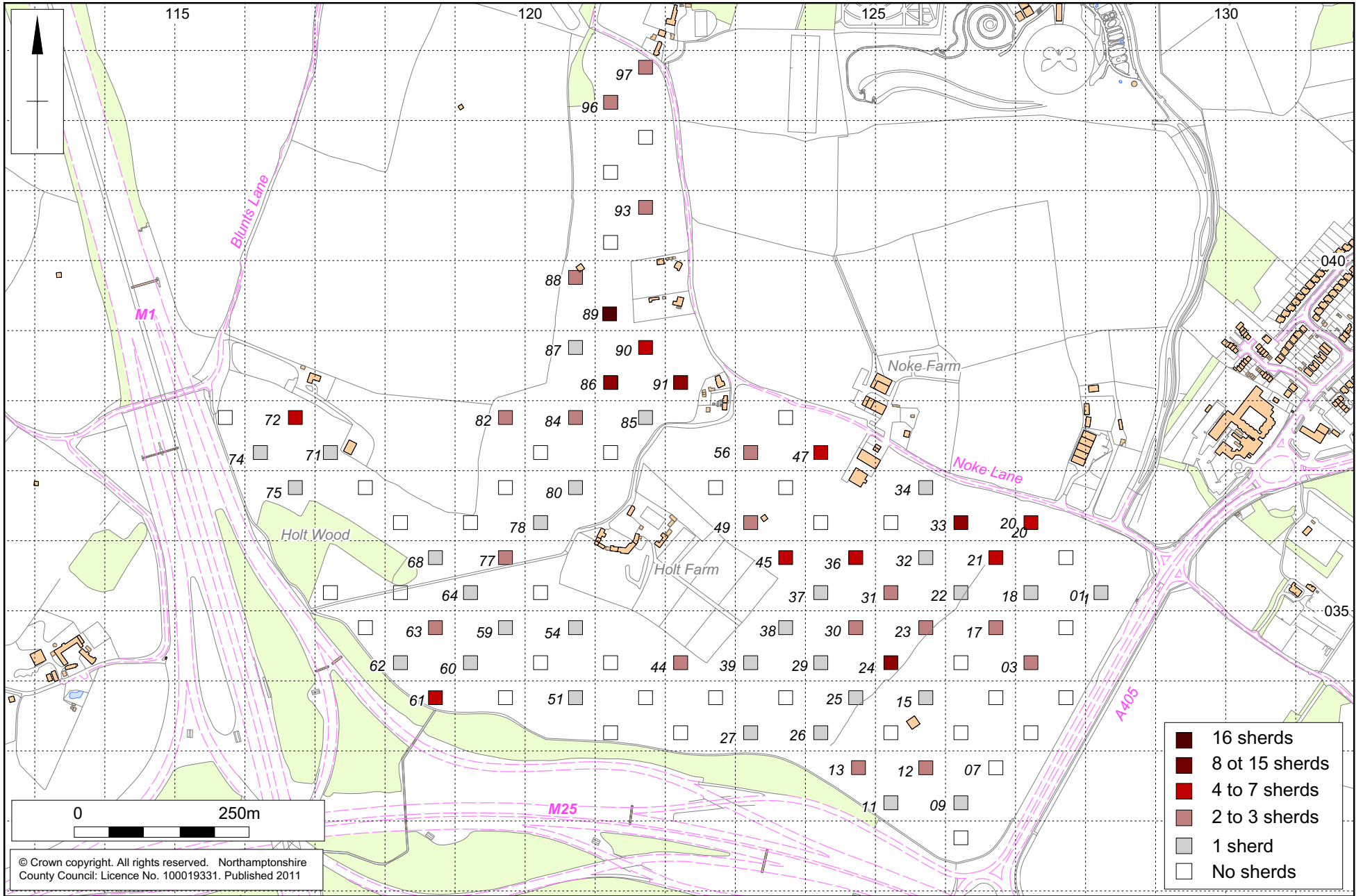


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Scale 1:7500 (A4)

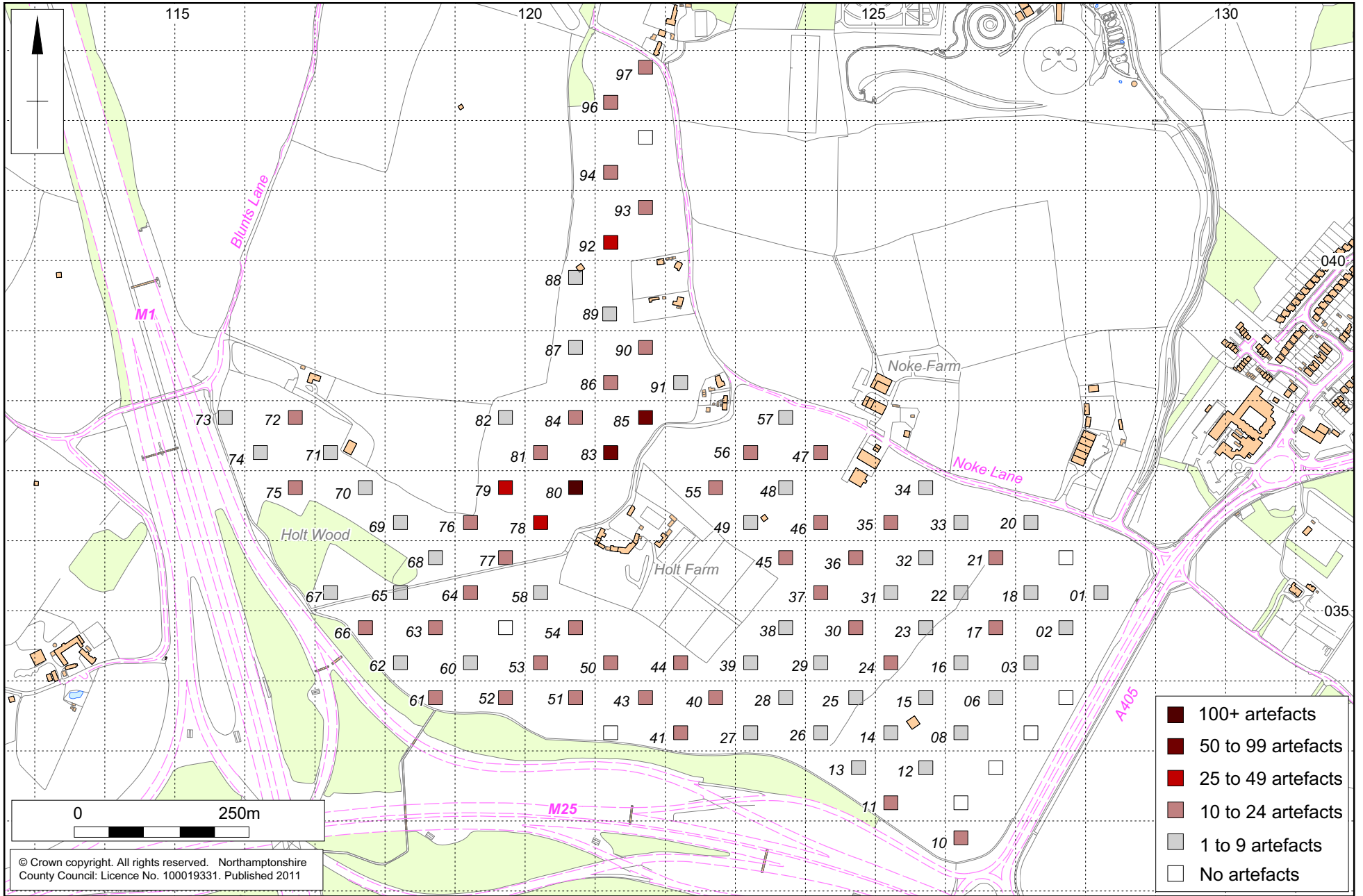
Distribution of modern pottery

Fig 10



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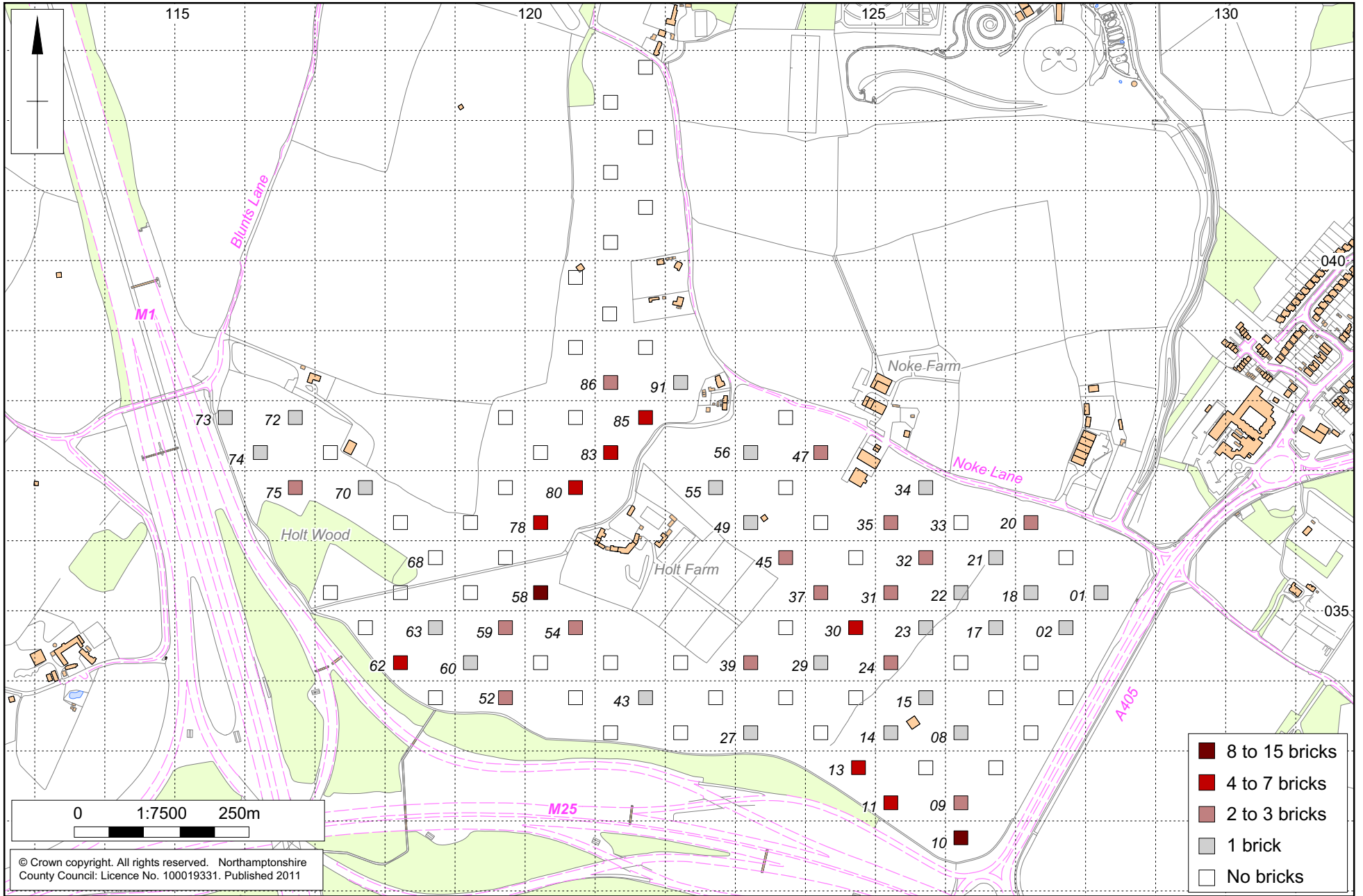
Scale 1:7500 (A4)



Distribution of ceramic tile Fig 11

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Scale 1:7500 (A4)

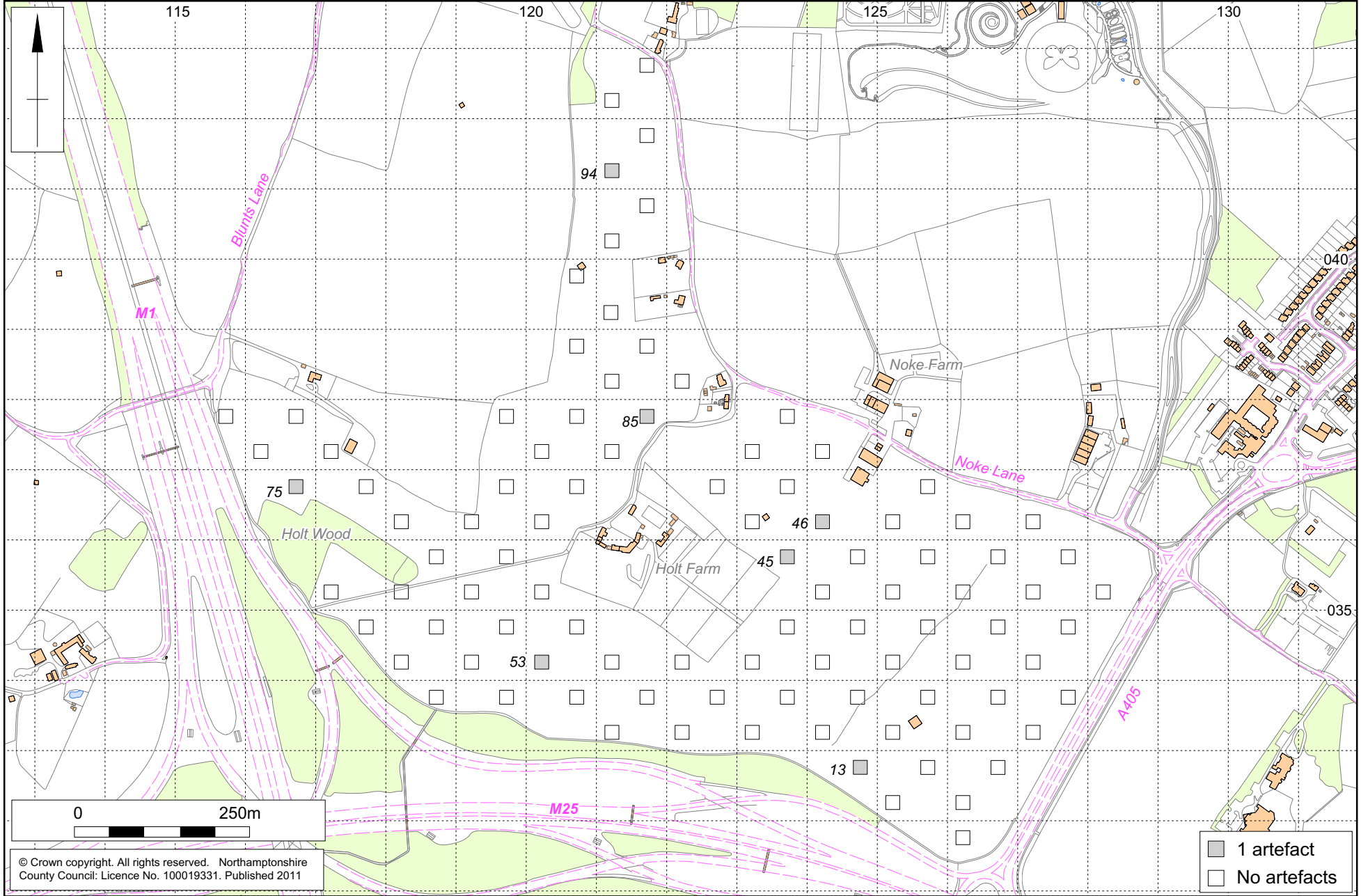


Distribution of brick Fig 12



Scale 1:7500 (A4)

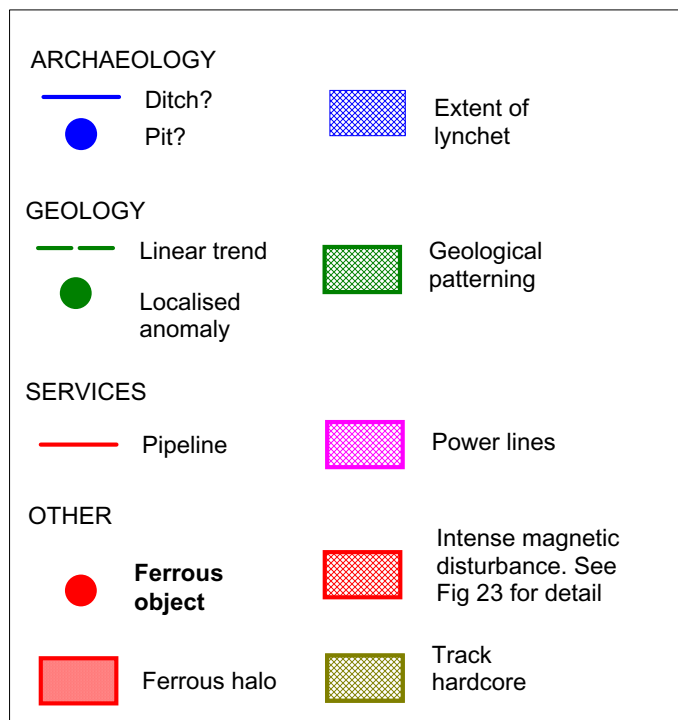
Distribution of stone Fig 13



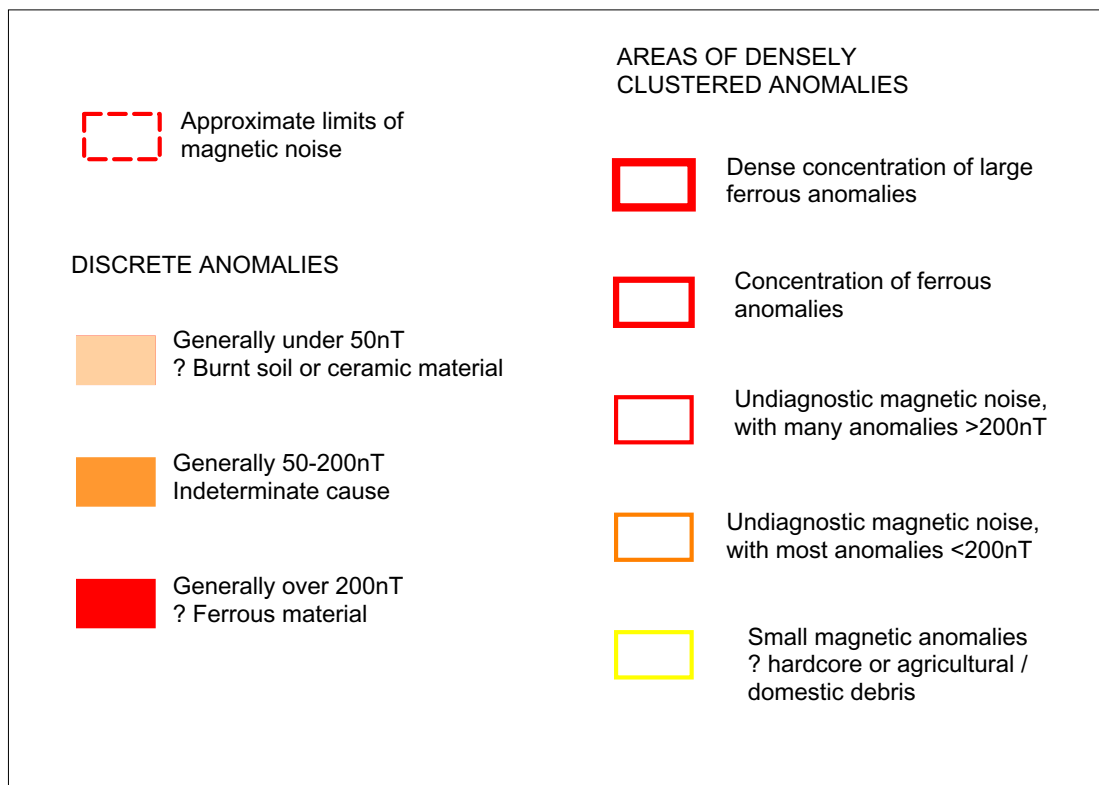
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■ 1 artefact  
□ No artefacts

## Geophysical Interpretation Key (Figs 18, 20 and 22)



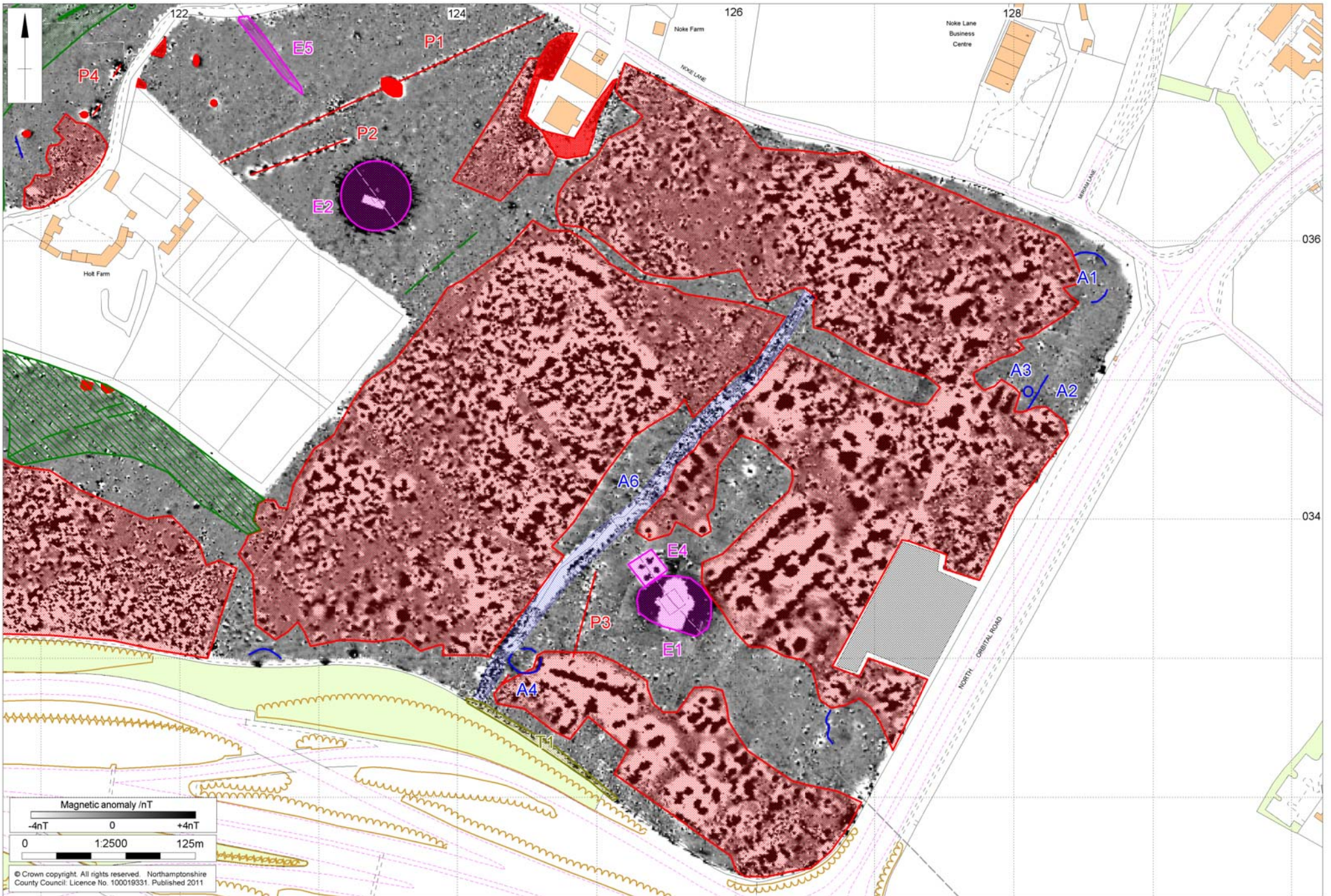
## Geophysical Interpretation Key (Fig 23)

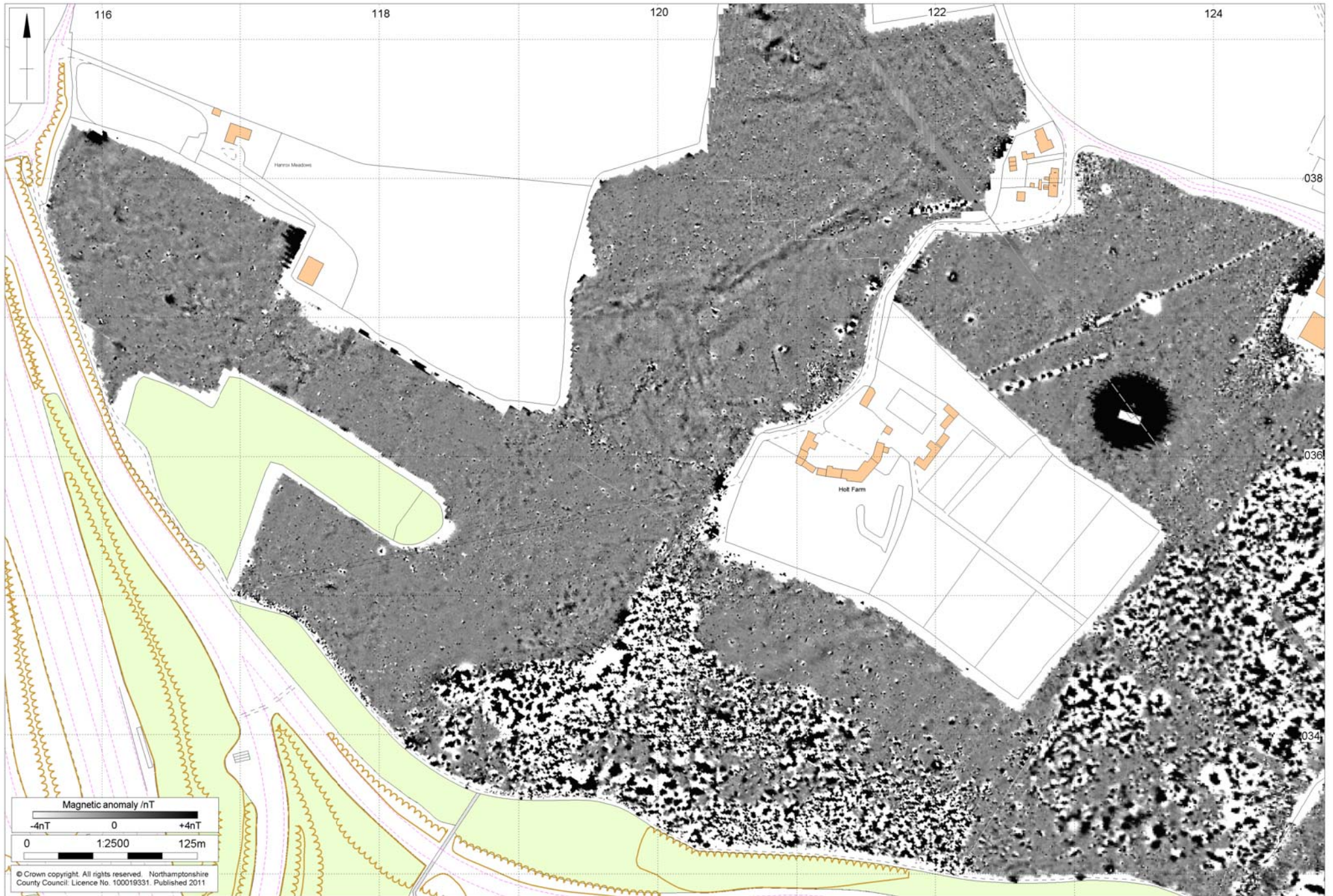


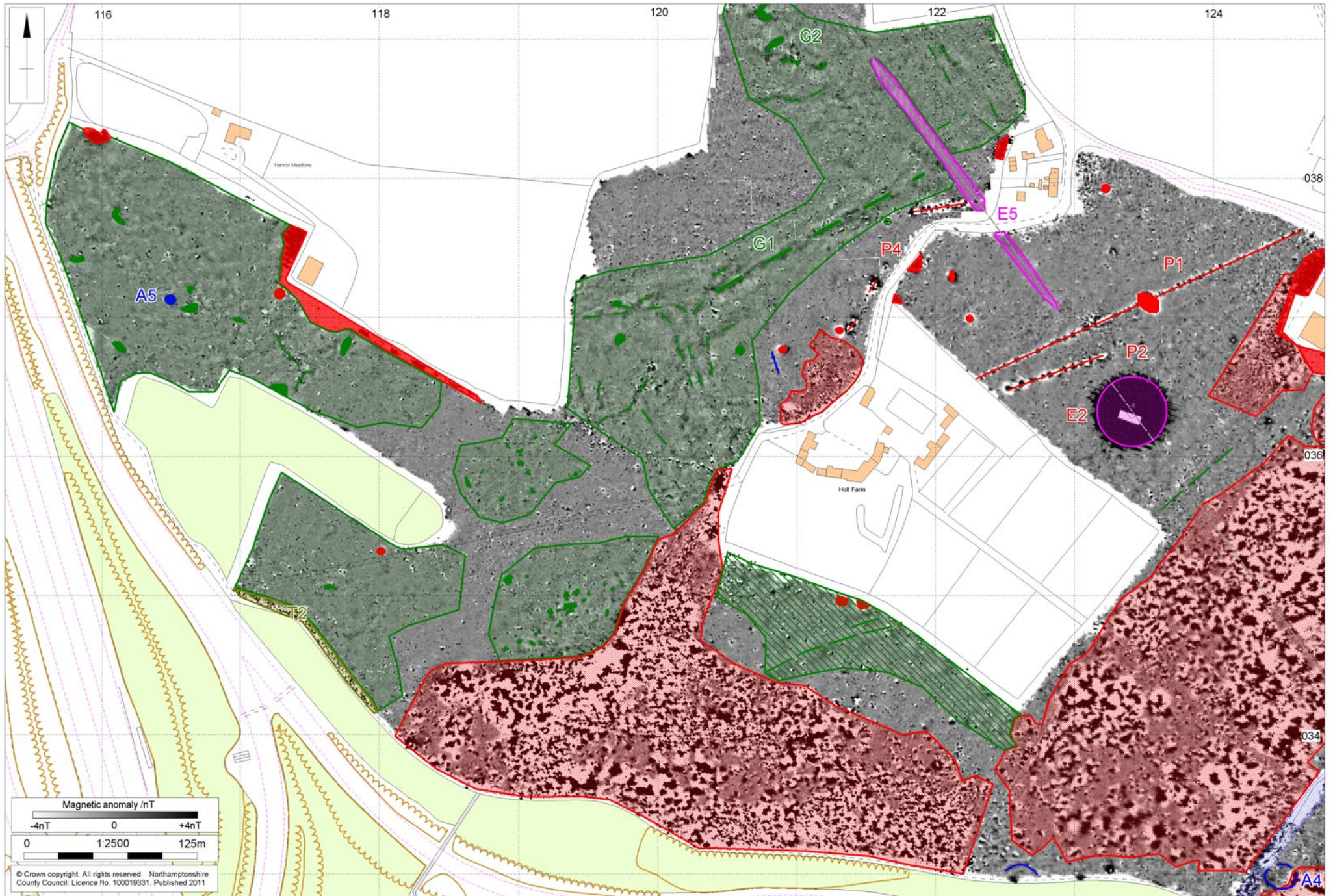




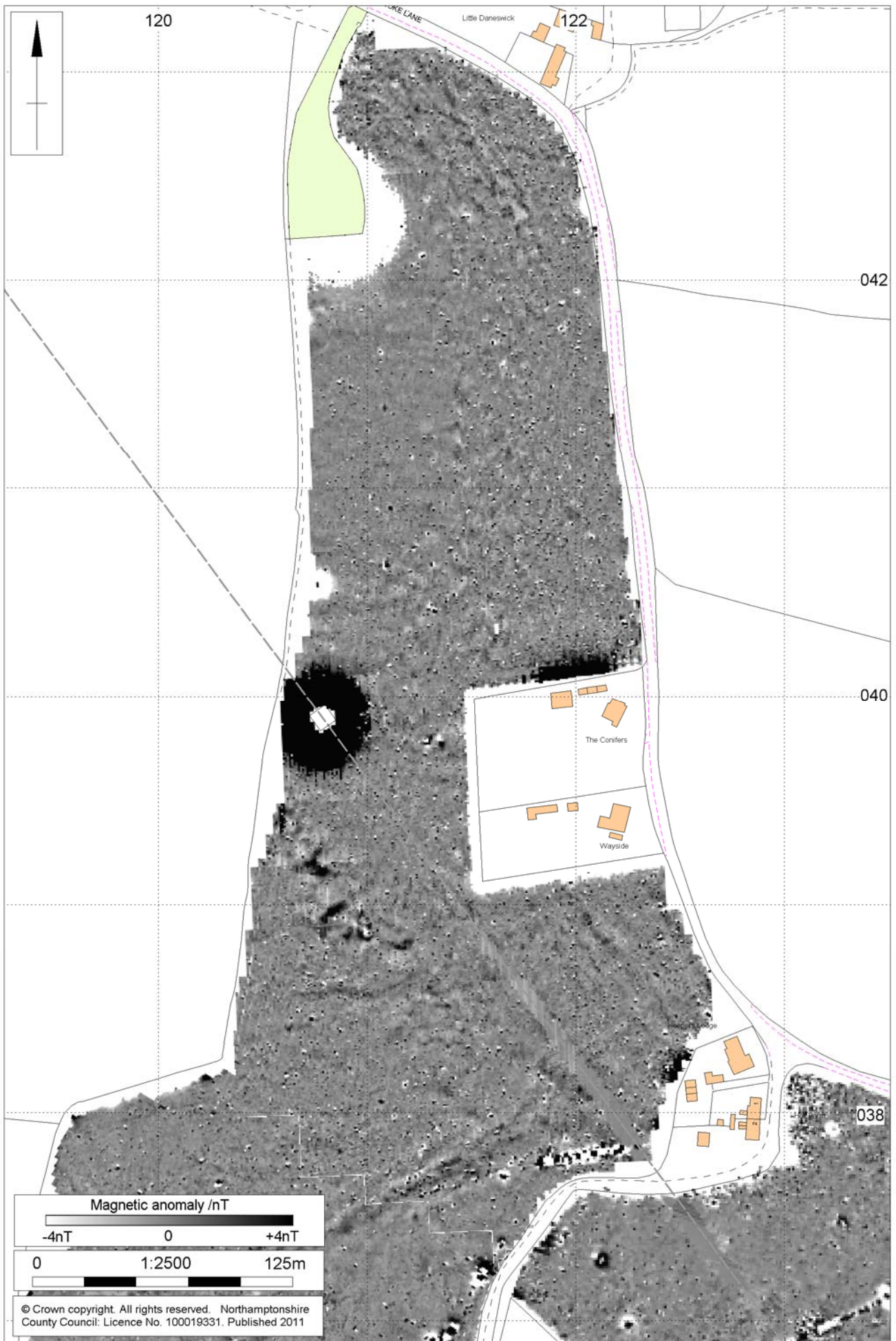












1:2500

Magnetometer survey results (north) Fig 21



1:2500

Magnetometer survey interpretation (north) (see Fig 14 for key) Fig 22



1:3000

Detailed interpretation of magnetic 'noise' (see Fig 14 for key) Fig 23



Northamptonshire County Council

# Northamptonshire Archaeology

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