

Luton Hoo Hyde Bedfordshire



Archaeological Investigation Report



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Cardy Construction Ltd

Luton Hoo, Hyde, Bedfordshire

NGR: TL 1046 1847

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SUMMARY

In January and February 2006, Oxford Archaeology (OA) carried out a series of field investigations at Luton Hoo, Hyde, Bedfordshire (TL 1046 1847) on behalf of Cardy Construction Ltd. The investigations revealed 3 main types of feature, all post-medieval in date - these included: 1) Medium sized ditches, which are most likely the remnants of previous field boundaries or trackways; 2) Large quarry pits, used to extract clay; 3) Small concentrations of shallow pits, which could be the remains of moorings for barrage balloons or the foundations for radar stations. In addition to these there were also a number of undated irregular features, which are thought to be the result of periglacial erosion. There was evidence across the estate of the use of Luton Hoo as a military centre in World War II. This took the form of asbestos remains in the topsoil probably originating from the roofs of Nissan Huts, and domestic rubbish bearing the NAAFI Logo (Navy Army Air Forces Institute). There was no indication of any surviving archaeological features pre-18th century. The fieldwalking produced a small assemblage of worked flint, which implies the presence of low density late Neolithic/early Bronze Age activity in the immediate area.

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 In January and February 2006, OA undertook a series of archaeological investigations within the Luton Hoo Estate, Bedfordshire, centred at NGR: TL 1046 1847. The investigations comprised trial trenching, strip, map and sample excavation, watching brief, fieldwalking and palaeoarchaeological investigation. Also included in this report are the results of the watching brief carried out in Flowergarden Wood in November 2005.
- 1.1.2 The archaeological works have been commissioned by Cardy Construction Limited and conform to a Scheme of Archaeological Resource Management (SARM) produced by OA (OA 2005), and a formal Written Scheme of Investigation (WSI). These were produced in response to a Brief issued from the County Archaeological Officer (CAO) of Bedfordshire County Council (BCC, 2004). This is in line with local planning policies and PPG16.

1.2 Geology and topography

- 1.2.1 Luton Hoo lies immediately south of the town of Luton on the southern edge of Bedfordshire. It is centred at NGR: TL 1046 1847 and covers an area of approximately 437 hectares.
- 1.2.2 Topographically Luton Hoo is in the Chilterns and lies on the west bank of the River Lee, which flows along the eastern boundary of the site. The land rises westwards

from a height of 100 m AOD in the river valley to a plateau occupying the western part of the site at a height of 150 m AOD.

- 1.2.3 The geology of the site is Upper and Middle Chalk with extensive clay with flints capping on the plateau and alluvium and valley gravels in the river valley. The site is occupied by the mansion and ancillary buildings, formal gardens and the remains of the designed landscape. There are extensive areas of woodland, parkland and land in cultivation.

1.3 **Archaeological and historical background**

- 1.3.1 A detailed description of the archaeological and historical background to the site was compiled for an Environmental Impact Assessment (OA 2003) and for the SARM, the results of which are presented below.
- 1.3.2 An Archaeological Desk Based Assessment combined with a rapid field reconnaissance exercise was undertaken in 1999 as part of a previous planning application (Wilson M, 1999a). This recognised that the development area has potential for archaeological remains of all periods.
- 1.3.3 Also in 1999, a trenched evaluation (Wilson M, 1999b) was undertaken of the former Dependency Area (proposed New Garden Wing) immediately north-west of the Mansion House. The objectives of the exercise were to attempt to determine the date of construction of an enclosing earthwork and to ascertain whether or not any earlier archaeological deposits were concealed beneath it.
- 1.3.4 In 2003, parts of the proposed Golf Course development area were evaluated in order to formulate an effective mitigation strategy and to identify any areas of archaeological sensitivity. The evaluation work, undertaken in phases by, and on behalf of, Oxford Archaeology (Biddulph E, 2003a; Fisher I and Butler A, 2003; Biddulph E, 2003b), was carried out in response to an archaeological Brief issued by Bedfordshire County Council, and ultimately formed an element of the Environmental Impact Assessment (Beamish H, 2003). The evaluation, which comprised field-walking of arable land, geophysical surveys and trial trenching (Fig. 2), identified archaeologically sensitive areas that required further investigation prior to the development of the site.
- 1.3.5 In 2002 and 2003, a further two archaeological recording actions were undertaken on the estate. The first of these followed the laying of a main water pipe from the London Road and along the southern perimeter of the arable field at Jackson's Hill (AA 2002). The second recording action took place during a combined geo-technical / services exploration and access construction within the proposed New Garden Wing.

The Estate of the Seventeenth to Twentieth Centuries

- 1.3.6 The site is dominated by the mansion (HER 734), a Grade I listed building, which in its present form dates to the early part of the 20th century. The building does,

however, incorporate earlier work dating back to the house designed by Robert Adam for the Earl of Bute in the mid 18th century and subsequent alterations.

- 1.3.7 An earlier house, known as the Napier House, existed on the site dating from the early 17th century when Robert Napier bought the estate. The exact location of this structure has not been definitively identified but engravings and ground observations indicate that it was immediately north-west of the present mansion house. The Dependency Area (proposed New Garden Wing) which stands north-west of the mansion house was evaluated in 1999 (Wilson, 1999b) in order to ascertain whether remains were concealed. Two trenches were placed in the outer side of the earthwork and a third was placed within the enclosure. There were no remains present. They revealed a construction date somewhere around the mid - 18th century when the old ground surface had been entirely removed to allow the structure to stand directly upon brickearth. A watching brief was carried out during works at the site in 2004, but again nothing was revealed.
- 1.3.8 The Napiers were granted a licence to enclose a deer park at Luton Hoo in 1622. The dominant feature of the parkland today, however, is the landscape designed by Capability Brown (HER 6989), which provided a setting for the house designed by Robert Adam. There are also important 19th and early 20th century additions to the gardens, particularly to the south and south east of the house. The parkland is included in English Heritage's *Register of Historic Parks and Gardens*, Grade II*.
- 1.3.9 The evaluation of the Golf Course area (*ante.* 1.3.4) identified several quarry pits, excavated for brickearth and clay, which are understood to pre-date the 18th century landscaping.
- 1.3.10 Luton Hoo was used as a military centre during World War II dotted throughout the estate are signs of defensive systems and activities associated with the conflict (now classed as monuments and falling within the Research Framework Priorities of English Heritage) (EH 1997, H6, p.50). These include concrete platforms for barrage balloons, searchlight or anti-aircraft guns, air-raid shelters and Nissan hut footprints. The exact locations of all features are not known. The concrete-surfaced road north of the mansion house is still known as Tank Drive and an area of hard-standing and proposed Car Park was formerly a Tank Park.

Medieval Evidence (11th century AD - early 17th century AD)

- 1.3.11 The archaeological record for medieval life within the bounds of the estate is both thin and fragmentary. There is no mention of the manor of Luton Hoo in Domesday and no documentary evidence is known before the late 13th century. It is believed, however, that low status settlement existed prior to the 17th century emparkment of some 300 acres by Sir Robert Napier. An archaeological recording action during the laying of a main water pipe south of Jackson's Hill in 2002 revealed the relict remains medieval cultivation, whilst possible denuded ridge and furrow has been noted in the designed landscape. Although no above ground remains are visible, ancient trees such as oaks and a maple, are embedded in the present landscape,

suggesting that the earlier landscape was largely wooded. Throughout the estate, deliberately concealed within the designed landscape and woodland are numerous brickearth extraction pits and their associated track-ways, much of which is believed to belong to the late medieval period.

Roman Evidence (1st century to 5th century)

1.3.12 This part of the Chilterns was heavily occupied throughout the Roman period and the high incidence of sites and finds within the immediate environs of Luton Hoo estate suggests that the estate is far from devoid of sites. A Roman coin hoard of over one thousand coins of third century date was discovered on the estate in the 1860s. The geophysical survey of the initial golf course area revealed a potential double ditched rectilinear enclosure.

Neolithic Evidence (c.6000 - c.3000 BP) to Bronze Age (c.3000 - c.2100 BP)

1.3.13 Field-walking of the arable land at Jackson's Hill identified a concentration of worked flint although trial trenching suggested that was unlikely to represent in situ deposits.

Mesolithic Evidence (10,500 BP -5,500 BP)

1.3.14 There is also evidence of the Mesolithic activity within the area as is clear from the assemblage recovered from the gardens. Information was received during the rapid reconnaissance survey, of the recovery of several barbed and tanged arrowheads from the gardens of Luton Hoo. These are believed to have derived from the dry river valley immediately to the south of the gardens at the rear of Luton Hoo house, which may be indicative of a game catchment area, or indeed Mesolithic exploitation of the landscape.

Palaeolithic Evidence (c.500,000 BP - c.10,500 BP)

1.3.15 The desk based study revealed that the geology of the Luton Hoo estate has the potential to contain rare 'pieces of landscape spared by glacial and post-glacial erosion. The grounds of the estate are situated upon geological drift that has the potential to reveal primary context material. Finds normally occur either in Brickearth, a fine alluvial sediment, or as surface finds on high ground in the 'Clay-with-flints' and Head Deposits of the Chiltern geology. Large areas of brickearth were identified within the application area during the evaluation in 2003 (*ante.* 1.3.4), whilst a Palaeolithic artefact was recovered from a Clay-with-flints deposit during an archaeological evaluation in 1999 (*ante.* 1.3.7).

2 AIMS

2.1 AAS A - Strip, Map and Sample

2.1.1 This area was known from previous works to contain undated archaeological features. Mitigation works are now occurring to elucidate further on the date and extent of these features.

2.1.2 To make available the results of the investigation.

2.2 AAS B - Geo-archaeological Assessment of Brickearth Deposits

2.2.1 To check the depth of the 'Brickearth' deposits. To obtain evidence for the presence / absence of Palaeolithic archaeological indicators beneath / within the Brickearth.

2.2.2 To make available the results of the investigation

2.3 AAS C - Field walking

2.3.1 To collect and quantify artefact data in order to observe the presence / absence of patterns or clusters of artefact types across the area. This will inform further works in the form of test pitting.

2.4 AAS E - Evaluation

2.4.1 To establish the presence or absence, extent, condition, nature, character, quality and date of archaeological remains within the proposal area.

2.4.2 To establish the ecofactual and environmental potential of archaeological deposits and features.

2.4.3 To make available the results of the investigation.

2.5 AAS F - Flowergarden Wood Development

2.5.1 To establish the presence or absence, extent, condition, nature, character, quality and date of archaeological remains within the proposal area.

2.5.2 To establish the ecofactual and environmental potential of archaeological deposits and features.

2.5.3 To make available the results of the investigation.

3 METHODOLOGY

3.1 AAS A - Strip, Map and Sample

(Figures 2 and 3)

3.1.1 The investigation comprised the stripping of an area 50 m by 100 m on Jackson's Hill (west). The overburden was removed under close archaeological supervision by a

360° mechanical excavator fitted with a toothless bucket. Excavation proceeded to the natural geology or the top of the first archaeological horizon, whichever was encountered first. This was then supplemented by hand excavation of archaeological deposits.

- 3.1.2 A site grid of 10 m spacing and related to the Ordnance Survey grid was established, all features were then planned using a scale of 1:50 or 1:20. The overall site plan was mapped using an EDM Total Station with AutoCAD software.
- 3.1.3 After consultation with the CAO, 2 trenches measuring 30 m x 10 m were excavated in the vicinity of Jackson's Hill (west) in order to assess the archaeological significance of continuing the 50 m x 50 m Strip, Map and Sample.
- 3.1.4 All features and deposits were issued with unique context numbers, and context recording was in accordance with established OA practices (OA Field Manual, 1992). Colour transparency and black-and-white negative photographs were taken of all archaeological features.
- 3.1.5 Finds were recovered by hand during the course of the excavation and bagged by context.
- 3.1.6 No deposits suitable for environmental sampling were encountered during the excavation

3.2 AAS B - Geo-archaeological Assessment of Brickearth Deposits

(Figure 2)

- 3.2.1 A series of 4 strategically placed assessment sondages were excavated in order to check the depth of the Brickearth deposits, and to obtain evidence for the presence / absence of Palaeolithic archaeological indicators beneath / within the Brickearth
- 3.2.2 The sondages were machine excavated and the stratigraphic sequence recorded in spits under the supervision of an experienced Geo-archaeologist. Approximately 5 m x 1.8 m wide, they were excavated down to the natural underlying Chalk bedrock, which averaged between 4 and 5 m deep. Fenced for safety during excavation, the sondages were backfilled immediately on completion.
- 3.2.3 At 1.5 m intervals approximately 100 litre samples (covering approximately 0.10 m depth) were placed on the side of the trench and examined with a trowel, as sieving the stiff clay was not possible. Sub-surface sediments at each location were logged on OA proformas using standard geological terminology, and the stratigraphy photographed in section.
- 3.2.4 Only four of the original 6 test pits were excavated because the information retrieved formed sufficient data of the geological deposits across site.

3.3 AAS C - Field walking

- 3.3.1 An area measuring 200 m x 150 m was systematically field walked once the site had been cultivated and allowed to weather for two weeks. The agreement of the County Archaeological Officer (CAO) was obtained before fieldwork commenced.
- 3.3.2 The collection strategy was based on a line walking system orientated on the national grid, with lines spaced at 2 m intervals. The finds were bagged every 10 m along the lines. Artefacts from all periods were collected from the ground surface, retained and removed for processing and analysis.
- 3.3.3 The results will be presented as density distributions for each artefact class across the site.

3.4 AAS E - Evaluation

(Figures 2 and 7)

- 3.4.1 Evaluation by trial trenching was undertaken in 4 of the identified new land-take areas of the proposed Golf Course (i.e. where design modifications have progressed beyond areas previously evaluated). These consisted of 4 trenches 2 x 30 m and 2 trenches 2 x 50 m.
- 3.4.2 In total 6 trenches were excavated by a 360° mechanical excavator fitted with a toothless bucket. Excavation proceeded to the natural geology or the top of the first archaeological horizon, whichever was encountered first. The trenches were cleaned by hand and the revealed features were sampled to determine their extent and nature, and to retrieve finds. No deposits suitable for environmental sampling were encountered during the evaluation.
- 3.4.3 Trench 2 was rotated 10 m to the west, due to its proximity to a large tree.
- 3.4.4 All archaeological features were planned and where excavated their sections drawn at scales of 1:20. All features were photographed using colour slide and black and white print film. Recording followed procedures laid down in the *OAU Fieldwork Manual* (ed. D Wilkinson, 1992).
- 3.4.5 Four trenches from the original plan were not excavated: 2 near Flowergarden Wood because of the trees, and 2 near Stockings Wood because that part of site was no longer going to be impacted by the development.

3.5 AAS F - Flowergarden Wood Development

- 3.5.1 Three trial trenches measuring a total of 110 m were strategically placed throughout the Flowergarden Wood development area, avoiding the remaining trees and modern drainage system.
- 3.5.2 The overburden was removed under close archaeological supervision by a 360° mechanical excavator fitted with a toothless bucket. Excavation proceeded to the

natural geology or the top of the first archaeological horizon. No deposits suitable for environmental sampling were encountered during the evaluation.

- 3.5.3 All trenches were planned at a scale of 1:100, and photographed using colour slide and black and white print film. Recording followed procedures laid down in the *OAU Fieldwork Manual* (ed. D Wilkinson, 1992).
- 3.5.4 The watching brief monitored the excavation of a number of geotechnical test pits in the Flowergarden Wood and Garden Wing, soil stripping for an access road and the base of a maintenance building, and the grubbing out of the Pump House foundations.

4 RESULTS: GENERAL

4.1 AAS A - Strip, Map and Sample

- 4.1.1 The excavation (AAS A) consisted of one main area measuring 50 m x 100 m and two trenches (Nos. 7 and 8) measuring 10 m x 30 m. Natural clay with flints was encountered at a depth of *c* 0.20 - 0.30 m below the present topsoil, there were patches of yellowish brown silty clay subsoil varying in thickness between 0 - 0.10 m. Only undated and post-medieval features were encountered on the main excavation; the post-medieval features consisted of 2 small parallel ditches running NW-SE and 1 medium ditch running NE-SW. In addition to these there were 2 large quarry pits, and 14 small shallow pits located in 2 concentrations.
- 4.1.2 The majority of undated features appear to be the result of natural geological processes. Possible features include a posthole (1007) located *c* 26E 9N (site grid), and a linear terminus (1003) at the south-western corner of site.
- 4.1.3 Trench 7 contained a post-medieval quarry pit, and two heavily truncated parallel linears which could be from a contemporary trackway.
- 4.1.4 Trench 8 contained no archaeological features.

4.2 AAS B - Geo-archaeological Assessment of Brickearth Deposits

- 4.2.1 The general stratigraphic sequence observed in the 4 test pits is summarised in table 1.

| Interpretation | Description | Period/Series Inferred depositional environment |
|-----------------------|-------------------------------|--|
| Topsoil | Loose, dark brown clay silt | Holocene |
| Subsoil | Moderate, mid-brown clay silt | Holocene |

| | | |
|------------------|---|---|
| Clay-with-flints | Stiff, massive red and orange brown clays and sandy clays (often black stained) with rounded sometimes clast supported flint cobbles, tabular flint nodules and patches of sand | Illuviated early Tertiary sediments (weathered Reading Beds) disturbed soliflucted/cryoturbated during the Quaternary |
| Bedrock | Well compacted chalk | Cretaceous sedimentary marine deposits |

4.3 AAS C - Field walking

4.3.1 The major artefact categories collected and recorded were: pottery, consisting of predominantly miscellaneous 19th - 20th century wares, with the exception of 6 sherds of a medieval fine sandyware, and 2 sherds of glazed red earthenware (16th century?). In addition to the pottery was found 58 pieces (859 g) of burnt unworked flint, 29 pieces worked flint, and a large assemblage of modern ceramic building material. Occasional small fragments of asbestos were collected from the west of the field, the material is thought to originate from the roofs of World War II Nissen huts.

4.4 AAS E - Evaluation

4.4.1 Trench 1, 2 and 6 revealed undated linear features, because of the level of truncation it was impossible to ascertain whether these features were archaeological or geological.

4.4.2 Trenches 3, 4, and 5 contained no archaeological features or deposits.

4.5 AAS F - Flowergarden Wood Development

4.5.1 Trenches 9, 11 and 12 contained no archaeological features.

4.5.2 Located in the topsoil was evidence of the estates' use by the military during 1945-6, which consisted of broken crockery bearing the Navy Army Air Forces Institute (NAAFI) logo. Trenches 9 and 11 contained modern service pipes, probably associated with ex-military buildings.

4.5.3 The watching brief revealed foundations and structures relating to the pump house and foundations of huts from the known 1940's military encampment, there was also made ground overlying natural deposits located in both Flowergarden Wood and the Garden Wing.

5 RESULTS: DESCRIPTIONS

5.1 AAS A - Strip, Map and Sample

Pit 1011

5.1.1 Pit 1011 measured *c* 13 m in diameter and was over 1.2 m in depth, it is possible that it consisted of two adjacent quarry pits backfilled at the same time - as some of the edges were irregular. The pit was backfilled with a succession of silty clay deposits

(1012), which contained large flint nodules. Modern ceramics, glass and building rubble had been dumped into it (not retained). The fill was cut by ditch 1061, overlain by subsoil and sealed by the topsoil.

- 5.1.2 Pit 1011 is the same pit that was uncovered and excavated in trench 14 of the 2003 evaluation (1403), when it was taken to a depth of 1.66 m but natural was not encountered.

Pit 1039

- 5.1.3 Pit 1039 measured 8 m in diameter and was excavated to a depth of 2.7 m, the base was not reached. The pit was backfilled with a dark greyish brown silty clay (1040), there was a thin layer of re-deposited chalk c 0.3 m from the top of the section and a large concentration of modern CBM and flint nodules c 0.7 m below this. A sample of CBM was retained.

Ditches 1061 and 1062

- 5.1.4 Ditches 1061 and 1062 ran parallel NW-SE across the south-western part of site, both had moderately sloping sides and a concave base. Ditch 1061 was excavated in two places and measured between 0.65 m and 0.80 m wide, and was c 0.24 m deep. This ditch cut across the fill of pit 1011. Ditch 1062 was also sectioned in two places (cuts 1013 and 1015) and measured between 0.82 m and 1.03 m wide, and 0.4 m deep. Both ditches contained one fill which consisted of a loosely compacted mid greyish brown silty clay, with moderate to frequent flint and gravel inclusions. Finds include couple of sherds of post-medieval pottery and ceramic building material. The topography of the landscape i.e. sloping to the west, would suggest that both ditches have been truncated by ploughing and / or erosion.

Ditch 1063

- 5.1.5 Ditch 1063 was located to the northern part of site and ran NE-SW, sectioned in two places (cuts 1047 and 1059) it measured between 0.95 m and 1.10 m wide with an average depth of 36.5 m. The ditch had moderately sloping sides, a concave base and was increasingly truncated as it sloped down the hill. The ditch contained a single fill, comprised of a loosely to moderately compacted mid brown clayey silt with occasional medium - large sub-angular flint inclusions. One sherd of post-medieval tile was retrieved from fill 1048.

Shallow pits

- 5.1.6 There were 2 concentrations of small round shallow pits, one group was located in grid square 17E, 40N and consisted of 9 pits. These varied in diameter from 0.6 m to 1.05 m, and depths ranged from 0.08 m to 0.2 m, it seems likely they have all been heavily truncated. The sides were moderate to steep, with a curved lower break of slope and a flat base. The fills were consistent, comprising a relatively compact mid brown clay silt with large to medium flint inclusions, occasional chalk and modern ceramic building material fragments were also present (not kept).

- 5.1.7 The other concentration of pits was located in grid square 0E, 70N and consisted of 5 pits, these varied in diameter from 0.75 m to 1.00 m. Depths ranged from 0.1 m to 0.3 m but truncation seems probable due to a dip in the landscape. The sides were very steep with a curved lower base of slope and a flat base. The fills comprised a loosely compacted mid greyish brown silty clay, with moderate flint and gravel inclusions. Fill 1052 contained a large (0.3 m x 0.5 m) lump of modern concrete (not kept).

Undated features

- 5.1.8 There was a possible posthole (1007) located in the south eastern part of the site (See Fig 3) and a linear *terminus* (1003) at the western edge of site. These could be geological as there were no other features which could be associated with them, and neither produced finds.
- 5.1.9 When the site was stripped it appeared that there was a high density of small segmented linear shaped features, as these were investigated it became apparent that they were more likely to be the result of natural geological erosion. This was because they were erratic in plan, the sides and bases were irregular, and the fills were inconsistent with a high occurrence of manganese. A sample of these features was excavated and recorded, but they are not considered to be archaeological in origin.

Trench 7

- 5.1.10 Trench 7 was aligned NE-SW and measured 10 m x 30 m. Natural clay with flints was encountered at *c* 152.26 m OD, overlain by 0.28 m thick layer of modern topsoil (700). Cut into the natural was a large modern pit (701), two parallel shallow ditches / gullies (not numbered) and a trial trench from the 2003 evaluation.
- 5.1.11 Cut 701 measured *c* 13 m in length and a minimum of 5 m in width, it was machine excavated to a depth of *c* 3 m but the base was not reached. Seven fills were noted (702-705, and 707-709) and these appeared to have been tipped in from the south-eastern side of the pit. Fills 702-704 consisted of a mid grey and orange brown silty clay with frequent building debris and occasional small - medium flint nodules. Fill 705 was made up of a layer of dumped bricks of varying types, these were cleaned and photographed and a sample was retained. Fills 707-709 consisted of a mid grey and orange brown redeposited clay natural, which contained little to no building rubble.
- 5.1.12 Two shallow linears running NE-SW were not numbered as they were so shallow, it is possible they are the remains of a trackway contemporary with the quarry pit, but they could be modern tractor wheel ruts.

Trench 8

- 5.1.13 Trench 8 was aligned NW-SE and measured 10 m x 30 m. Natural clay with flints was encountered at *c* 156.54 m OD, overlain by 0.2 m of mid orangish brown clayey silt subsoil (801) and 0.3 m of dark brown clayey silt topsoil (800). No archaeology was present.

5.2 AAS B - Geo-archaeological Assessment of Brickearth Deposits

- 5.2.1 The logged sections show little variation in the sedimentary sequence from this general pattern. No archaeology was present in any of the interventions and brickearth was not apparent during the investigation. Bedrock was proved in all test pits, encountered consistently at a depth of between 4 and 5 m from the ground surface.
- 5.2.2 In all test pits, the Clay-with-flints are observed to be highly heterogeneous. Areas of clast supported rounded flint pebbles and cobbles are present; large patches of sands and sandy clays; veins of manganese, giving the sediments the black-stained appearance and large tabular and irregular flint nodules.

5.3 AAS C - Field walking

- 5.3.1 The site is located on a silty clay soil that is situated on a gentle westerly sloping topography. The depth of soil naturally becomes thinner towards the top of the slope, there were a couple of natural dips in the field where an orangish brown subsoil could be seen on the surface. Field conditions for fieldwalking within the area were good for finds visibility, the weather was dry and cold.
- 5.3.2 An area on the east of Jackson's Hill was ploughed, left to weather for over ten days and then field walked during the week starting 30-01-06. The major artefact categories collected and recorded were: pottery, burnt unworked flint, worked flint, asbestos and ceramic building material.
- 5.3.3 The criteria which separate a definitive 'concentration' of material, implying a site, and a random scatter, implying material spread during later cultivation, are difficult to define. The results, therefore, involve an element of subjectivity dependent upon the type of material in question. Worked flint, for example, survives relatively well in ploughsoil, though it can become heavily abraded. Prehistoric pottery, however, being less well fired than Roman or medieval examples, will not survive well in disturbed ploughsoils and will appear, if at all, in very small quantities.
- 5.3.4 A low density of worked flint was recovered (Fig. 9). The flint was mainly located to the west of the assessed area, however, specific concentrations were not identified. The small number of pieces limits the interpretative value of the assemblage, however, the material implies the presence of late Neolithic/early Bronze Age activity in the immediate area.
- 5.3.5 The pottery assemblage comprises sherds dating to the medieval, post medieval, and modern periods (Fig 10). The pottery was mainly located to the west of the assessed area, but no specific concentrations were identified. The medieval pottery was also recovered from the western part, but as only 6 sherds were collected, little can be interpreted from it, except for providing evidence of medieval activity in the area.

- 5.3.6 A representative selection of diagnostic, and mainly modern, ceramic building material was collected from surface scatters (Fig. 11). These were concentrated in the SE, and middle-western part of the Study Area.
- 5.3.7 In addition to the ceramic building material, occasional small fragments of asbestos were collected from the west of the field. The material is thought to originate from the roofs of Nissan huts, possibly located on the Luton Hoo estate during World War II.

5.4 AAS E - Evaluation

(Figure 2)

Trench 1

- 5.4.1 Trench 1 was aligned E-W and measured 2 m x 50 m. Natural clay with flints was encountered at *c* 159.01 m OD and was cut by a linear feature (103) running N-S. This was overlain by a 0.3 m thick deposit of loosely compacted mid orangish brown silty clay subsoil (102), and a 0.3 m thick layer of modern topsoil (101).
- 5.4.2 Cut 103 measured 0.60 m deep by 1.40 m wide, with shallow sloping sides and a rounded base. This was filled by loosely compacted mid - light brown clayey silt, with occasional sub-angular inclusions (104), there were no finds.

Trench 2

- 5.4.3 Trench 2 was aligned NE-SW and measured 2 m x 50 m. Natural clay with flints was encountered at *c* 157.88 m OD and was cut by two linear features (201 and 203) running *c* NW-SE. Overlying the fills of these was 0.35 m thick layer of modern topsoil (200).
- 5.4.4 Cut 201 measured *c* 0.55 m deep by 0.65 m wide, with moderately sloping sides and a flat base. This was filled by a mid yellowish brown silty clay with occasional small sub-rounded stones (202). Cut 203 measured 0.55 m deep by 0.40 m wide, with very steep sides and a V shaped base. The fill of this (204) was the same colour and consistency as (202); neither produced any datable evidence.

Trench 3

- 5.4.5 Trench 3 measured 2 m x 30 m and was orientated NW-SE, natural orange clay with flints was encountered at *c* 155.84 m OD. Overlying this was 0.15 m of loosely compacted mid-dark brown clayey silt subsoil (301) with occasional organic material, and 0.1 m thick layer of modern topsoil (300).
- 5.4.6 Cut into the NW corner of the trench was a modern water pipe, this ran NNE towards an old animal trough located near Stockings Wood.

Trench 4

- 5.4.7 Trench 4 was aligned N-S and measured 2 m x 30 m. Natural clay with flints was encountered at *c* 156.70 m OD. This was overlain by 0.25 m mid-brown clayey silt subsoil (401), and 0.1 m thick layer of modern topsoil (400). There was no archaeology present.

Trench 5

- 5.4.8 Trench 5 was aligned NW-SE and measured 2 m x 30 m. Natural clay with flints was encountered at *c* 155.79 m OD, this was overlain by 0.4 m of mid-brownish grey clayey silt with occasional small flint nodules (500). No archaeology was present.

Trench 6

- 5.4.9 Trench 6 was aligned NW-SE and measured 2 m x 30 m. Natural clay with flints was encountered at *c* 157.24 m OD, this was cut into by a shallow linear feature (603) running NE-SW *c* 8 m from the south-eastern end of the trench. The fill of the ditch was overlain by 0.2 m mid-dark brown clayey silt subsoil (602) with frequent small-medium flint inclusions, and a 0.1 m thick layer of modern topsoil (601).
- 5.4.10 Cut 604 measured 0.25 m deep by 0.75 m wide, with moderately curving sides and a flat base. This was filled by a loosely compacted greyish brown silty deposit (604) with frequent small flint nodules and occasional flecks of manganese. There was no dateable evidence.

5.5 AAS F - Flowergarden Wood Development

- 5.5.1 The stratigraphy of Trenches 9, 11 and 12 was very similar, therefore it will only be described once. Overlying the natural was *c* 0.36 m thick layer of mid-light yellowish brown silty sand subsoil, and *c* 0.23 m of very dark greyish brown sandy loam with a high level of organic matter, for example leaf mulch and roots. No archaeological features were present in any of the trenches.

Trench 9

- 5.5.2 Trench 9 was aligned NE-SW and measured 2 m x 50 m, natural clay with flints was encountered at *c* 157.74 m OD.
- 5.5.3 There was a modern metal pipe with a stopcock surrounded by bricks running north across the trench; this probably relates to an ex military building.

Trench 11

- 5.5.4 Trench 11 was aligned NNW-SSE and measured 2 m x 30 m, natural clay with flints was encountered at *c* 158.39 OD.
- 5.5.5 There were two modern services, one running NW-SE and the other running E-W. These are also likely to be contemporary with the military activity on site.

Trench 12

- 5.5.6 Trench 12 was aligned NE-SW and measured 2 m x 30 m, natural clay with flints was encountered at *c* 158.50 OD.

Watching Brief

- 5.5.7 The natural, a tenacious orange-brown silty clay, was exposed within the base of the deeper excavations. This was overlain by a layer of yellowish brown clayey gravel, a probable alluvium, of up to 0.3 m in depth. Overlying this was a layer of greyish brown loam silt, a buried soil which in turn was sealed by a layer of dark brown leaf mould and loam 0.15 m deep. Within the area of the Pump House it could be seen that the uppermost layers had been stripped down to the natural clay prior to the original construction. During the stripping of an access road a tarmac path and 2 foundations composed of brick and breeze blocks were encountered below the leaf mould and loam. Examination of the 1942/3 map entitled "Layout of the Headquarters Eastern Command" showed them to be the northern walls of the Quartermasters Stores and an associated roadway. No archaeology predating the 19th century pump house was observed.
- 5.5.8 The trees within the woodland areas due for development had been felled and the stumps removed prior to the stripping for the base of the maintenance building. This had caused large areas of disturbance within the surface of the underlying natural, and while the works monitored produced no significant archaeology it was felt that this was due to the absence of features or deposits rather than this disturbance. The excavation of the proof holes prior to the installation of the percussion drilling rig were also monitored. These hand dug holes *c* 0.4 m deep, replicated the results observed during the excavation of the trial pits.
- 5.5.9 Two test pits were excavated in the area of the proposed swimming pool, to the rear of the coach house, in order to test for contamination in the soil. Natural clay with flints was encountered 1.20 m below the current ground level. This was overlain by 0.9 m of made up ground containing a high frequency of modern ceramic building material (sampled), and 0.3 m of loose dark brown highly organic silt topsoil.
- 5.5.10 Eight geotechnical pits were dug in the area of the Garden Wing in order to collect samples for chemical analysis. Immediately to the south of the old boiler house, the natural chalk was encountered 0.5 m below the current ground level. This was overlaid by a orangey brown silty clay with chalk flecking. This varied in depth from 0.1 m within the southern end of the site up to 2.5 m in depth within areas to the west and east of the site. This was overlaid by a black gritty silt between 0.15 m and 0.4 m in depth. The presence of ash and clinker within this deposit suggests that it was material cast out from the boiler house. Within the footprint of the (now demolished) boiler house a sub basement had reduced the area below the base of the test pits.

5.5.11 The visible topology and the lack of soil deposits within the observed stratigraphy suggest that this area had been heavily truncated in the past, possibly up to 5 m in depth, in order to conceal the boiler house and ancillary buildings.

6 FINDS

6.1 Lithics

By Rebecca Devaney (OA)

- 6.1.1 A total of 29 pieces of worked flint were recovered from 27 grid squares and a further 58 pieces (859 g) of burnt unworked flint were recovered from 35 grid squares during field walking at Luton Hoo (*Table 2*). The flint was mainly located to the west of the assessed area, however, specific concentrations were not identified.
- 6.1.2 The flakes were probably created by hard hammer knapping as clear points and cones of percussion, pronounced ripples and hinge terminations were present on many pieces. Platform edge abrasion was also seen on three pieces and suggests a degree of preparation and planning in the reduction sequence. Roughly equal numbers of secondary and tertiary flakes were present in the assemblage, with just one primary flake being present. The single blade exhibits dorsal blade scars which indicates it was probably removed from a prepared blade core. The debitage is reminiscent of late Neolithic/early Bronze Age flint industries.
- 6.1.3 The only retouched pieces to be recovered are two quite different end and side scrapers. The first, from square E 10-20, is fairly rounded in shape and has direct retouch on the distal end and distal left. The second, from square FFF 60-70, is smaller and thinner with direct retouch on both lateral sides and the distal end. Both are probably hard hammer struck and are consistent with the late Neolithic/early Bronze Age date provided by the debitage.
- 6.1.4 Most of the flint has suffered slight to moderate levels of post-depositional damage, which is consistent with their recovery from the topsoil. However, just two pieces are lightly corticated. Furthermore, two pieces are broken and one is lightly burnt. Where identifiable, all of the raw material is gravel derived flint. This occurs as nodules in the clay geology and is therefore likely to be locally derived.
- 6.1.5 The small number of pieces limits the interpretative value of the assemblage, however, the material implies the presence of late Neolithic/early Bronze Age activity in the immediate area.

6.2 Pottery

By Paul Blinkhorn

6.2.1 The pottery assemblage comprised 82 sherds with a total weight of 561 g. The bulk of the material was modern, although a six sherds of medieval wares were noted. Where appropriate, the codings and chronology of the Bedfordshire County Archaeology Service type-series were used, as follows:

F300: C03: Fine sandy ware, 12th – 13th C.

F425: P01: Glazed Red Earthenware, 16th century?

F1000: Miscellaneous 19th – 20th century wares.

The pottery occurrence by number and weight of sherds per transect/stint by fabric type is shown below in Table 1 (*Appendix 2*).

7 DISCUSSION AND INTERPRETATION

7.1 AAS A - Strip, Map and Sample

Reliability of Field Investigation

7.1.1 In response to the low quality and uncertain nature of the archaeology uncovered during the evaluation an informed mitigation strategy was adopted. This comprised the stripping of topsoil from a 100 m x 50 m area. As low levels of archaeological significance were encountered it was not deemed necessary to strip the remaining 4 areas fully. Trenches 7 and 8 measuring 30 m x 10 m were excavated in 2 of the proposed locations and these supported the results of the initial excavation area as a good indication of the density and type of archaeological features across site.

Overall Interpretation

7.1.2 Three main types of feature were identified, all post-medieval in date - these included: 1) Medium sized ditches; 2) Large quarry pits; 3) Small concentrations of shallow pits. In addition to these there were also a number of undated irregular features, most of which are thought to be the result of periglacial erosion, with the possible exception of posthole (1007).

7.1.3 Ditches 1061 and 1062 are probably the remains of a post-medieval trackway running NW-SE across Jackson's Hill. If looked at in context, these ditches run parallel with a number of other trackways across the Luton Hoo estate, for example near Bull Wood.

7.1.4 Ditch 1063 was slightly larger, and allowing for truncation it seems likely that this was a boundary or enclosure ditch. Supporting this theory are the current boundaries of the Jackson Hill field which run along a similar alignment.

- 7.1.5 The large quarry pits were noted as a common feature across the site from the 2003 evaluation. They were presumably dug to extract the brickearth and underlying clay. Dating is uncertain as backfilling of the pits need not have occurred until long after they had been abandoned. Former quarries were depicted on a map of 1847, and the extensive landscaping work commencing a century earlier provides a context for the abandonment of quarry areas. Pits 1011 and 1039 contained 19/20th century building rubble.
- 7.1.6 The concentrations of shallow pits could be evidence of World War II defensive systems or activity associated with the conflict, for example the platforms for searchlight / anti-aircraft guns, or barrage balloon moorings. This could be supported by the pits' appearance in plan to follow a roughly double concentric circular arrangement, and by the find in pit 1051 of a large fragment of concrete. The level of truncation would suggest that only a small percentage of these features have survived.
- 7.1.7 Trench 7 contained a quarry pit similar to those found on the main excavation. The fills contained within feature 701 contained 19th/20th century rubble, which might indicate that the pit was backfilled with demolition from the M1 motorway construction.
- 7.1.8 Trench 7 contained two shallow linears running SW-NE, these were located in trench 27 of the 2003 evaluation, and it was suggested that they were the remnants of agricultural furrows. The 30 m x 10 m trench did not reveal a continuation of these furrows, and it seems likely that they are isolated - possibly a trackway or wheel ruts from a tractor, rather than evidence for an extensive system of later medieval or early post-medieval agricultural ridge and furrow previously suggested. (Biddulph, 2003b)

7.2 AAS B - Geo-archaeological Assessment of Brickearth Deposits

- 7.2.1 Brickearth was not apparent during the investigation, despite Luton Hoo and Caddington being located on the same bedrock and mapped superficial geology, and lying at relatively comparable height and on similar general topography.
- 7.2.2 The lack of observed brickearth at Luton Hoo is considered likely, as reinvestigation of the Caddington site found these deposits to be highly localised and difficult to locate (Sampson, 1978). The fact that the site is located on The Plain: a plateau with little variation in bedrock depth, and no notable basin-shaped depressions in which the mid and late Pleistocene brickearths have formed (Catt and Hagen, 1978), suggests it is possible that these brickearths do not exist in this area of Luton Hoo Park.
- 7.2.3 The degree of mixing of sediments interpreted as Clay-with-flints can be attributed to several processes. Avery (1964 cited Catt and Hagen, 1978) suggested weathering of

Chalk, Eocene and later sediments disturbed by local ice fields as the mechanism producing the assorted sedimentology of these superficial deposits. Subsequent heavy disturbance during the Quaternary, for example disturbance by warm climate dissolution of the Upper Chalk; disturbance by frost-heave, cryoturbation and solifluction (Catt and Hagen, 1978) adequately explains the heterogeneity of the deposits described.

- 7.2.4 The open excavation and 6 evaluation trenches demonstrated a lack of archaeology in the area, and natural features recorded across the site were possibly indicative of hollows created by processes similar to those important in forming the Clay-with-flints, for example cryoturbation and localised chalk dissolution (F. Wenban-Smith pers comm.).

7.3 **AAS E - Evaluation**

Reliability of Field Investigation

- 7.3.1 The trenches were located to investigate spaces not included in the 2003 evaluation. The sample provided by the trenching strategy should give a reliable indication of the presence and absence of significant archaeological features. Although it is worth noting that the area which was stripped in response to the 2003 evaluation showed a high proportion of potential linears turning out to be natural geological features. It is therefore possible that some of the identified undated linears are not of archaeological significance. The high level of truncation observed across the Luton Hoo estate suggests that the full extent of archaeological activity has been lost, presumably through extensive landscaping and farming, with evidence surviving largely as bases of features.

Overall Interpretation

- 7.3.2 Six evaluation trenches were excavated across the areas of impact. Three trenches contained a small number of heavily truncated undated linears, these are unlikely to indicate significant archaeological activity as there were no features discovered in these areas from previous investigation. It is possible that they represent earlier boundary ditches and / or remnants of field systems, as the linears were undated it is also possible that they are natural channels formed from geological processes.

7.4 **AAS F - Flowergarden Wood Development**

- 7.4.1 No significant archaeology earlier than the 19th century was encountered during the work within Flowergarden Woods. The modern services, and finds present in the topsoil supported the known history of the estate as an army demobilisation college between 1945 and 1946.

7.4.2 The degree of truncation (Probably 19th century in date) within the area of the Garden Wing is such that only structures and deposits dating after this event have survived.

7.4.3 During the course of the watching brief no evidence for occupation or other activity, or of residual finds from periods other than the post-medieval were encountered.

7.5 **AAS C - Fieldwalking**

7.5.1 The artefact assemblage recovered during fieldwalking is predominantly post medieval/modern in date, with a low level scatter of prehistoric flint recorded within the field. The presence of this material is indicative of activity of these periods occurring within the general environs of the site.

7.5.2 Taking into account the limitations of non-intrusive survey of this type the results appear to indicate low potential for archaeological remains within the area.

APPENDICES

APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

AAS A - Strip, Map and Sample

| <i>Ctxt No</i> | <i>Type</i> | <i>Width (m)</i> | <i>Thick. (m)</i> | <i>Comment</i> | <i>Finds</i> | <i>No./wt</i> | <i>Date</i> |
|----------------|-------------|------------------|-------------------|-------------------------------|--------------|---------------|-------------|
| 1000 | Layer | | 0.25 | Topsoil | | | |
| 1001 | Layer | | 0.15 | Subsoil | | | |
| 1002 | Layer | | | Natural clay with flints | | | |
| 1003 | Cut | 0.7 | 0.34 | Possible ditch (same as 1064) | | | |
| 1004 | Fill | | 0.34 | Fill of 1003 | | | |
| 1005 | Cut | 0.65 | 0.22 | Ditch | | | |
| 1006 | Fill | | 0.22 | Fill of 1005 | Pottery, CBM | | Post-med |
| 1007 | Cut | 0.31 | 0.32 | Possible posthole | | | |
| 1008 | Fill | | 0.32 | Fill of 1007 | | | |
| 1009 | Cut | 1.4 | 0.25 | Natural oval feature | | | |
| 1010 | Fill | | 0.25 | Fill of 1009 | | | |
| 1011 | Cut | 13 | >1.20 | Quarry pit | | | |
| 1012 | Fill | | >1.20 | Fill of 1011 | | | |
| 1013 | Cut | 0.82 | 0.4 | Ditch | | | |
| 1014 | Fill | | 0.4 | Fill of 1013 | Pottery, CBM | | Post-med |
| 1015 | Cut | 1.03 | 0.4 | Ditch | | | |
| 1016 | Fill | | 0.4 | Fill of 1015 | CBM | | Post-med |
| 1017 | Cut | 0.8 | 0.26 | Ditch | | | |
| 1018 | Fill | | 0.26 | Fill of 1017 | | | |
| 1019 | Cut | 0.74 | 0.26 | Natural gully | | | |
| 1020 | Fill | | 0.26 | Fill of 1019 | | | |
| 1021 | Cut | 0.8 | 0.1 | Shallow pit | | | |
| 1022 | Fill | | 0.1 | Fill of 1021 | | | |
| 1023 | Cut | 0.8 | 0.1 | Shallow pit | | | |
| 1024 | Fill | | 0.1 | Fill of 1023 | | | |
| 1025 | Cut | 0.8 | 0.1 | Shallow pit | | | |
| 1026 | Fill | | 0.1 | Fill of 1025 | | | |
| 1027 | Cut | 0.8 | 0.09 | Shallow pit | | | |
| 1028 | Fill | | 0.09 | Fill of 1027 | | | |
| 1029 | Cut | 0.8 | 0.09 | Shallow pit | | | |
| 1030 | Fill | | 0.09 | Fill of 1029 | | | |
| 1031 | Cut | 0.8 | 0.16 | Shallow pit | | | |
| 1032 | Fill | | 0.16 | Fill of 1031 | | | |
| 1033 | Cut | 0.8 | | Shallow pit (unexcavated) | | | |
| 1034 | Fill | | | Fill of 1033 | | | |
| 1035 | Cut | 0.8 | | Shallow pit (unexcavated) | | | |
| 1036 | Fill | | | Fill of 1035 | | | |
| 1037 | Void | | | Void | | | |
| 1038 | Void | | | Void | | | |

| | | | | | | |
|------|-------|------|------|-------------------------------|-----|----------|
| 1039 | Cut | 8 | >2.7 | Quarry pit | | |
| 1040 | Fill | | >2.7 | Fill of 1039 | CBM | Post-med |
| 1041 | Cut | 0.6 | 0.3 | Natural gully | | |
| 1042 | Fill | | 0.3 | Fill of 1041 | | |
| 1043 | Cut | 0.8 | | Shallow pit (unexcavated) | | |
| 1044 | Fill | | | Fill of 1043 | | |
| 1045 | Cut | 0.8 | | Shallow pit (unexcavated) | | |
| 1046 | Fill | | | Fill of 1045 | | |
| 1047 | Cut | 0.95 | 0.38 | Ditch | | |
| 1048 | Fill | | 0.38 | Fill of 1047 | | |
| 1049 | Cut | 1 | 0.27 | Shallow pit | | |
| 1050 | Fill | | 0.27 | Fill of 1049 | | |
| 1051 | Cut | 0.75 | 0.23 | Shallow pit | | |
| 1052 | Fill | | 0.23 | Fill of 1051 | | |
| 1053 | Cut | 0.75 | 0.17 | Shallow pit | | |
| 1054 | Fill | | 0.17 | Fill of 1053 | | |
| 1055 | Cut | 0.62 | 0.1 | Shallow pit | | |
| 1056 | Fill | | 0.1 | Fill of 1055 | | |
| 1057 | Cut | 0.75 | | Shallow pit (unexcavated) | | |
| 1058 | Fill | | | Fill of 1057 | | |
| 1059 | Cut | 1.1 | 0.35 | Ditch | | |
| 1060 | Fill | | 0.35 | Fill of 1059 | | |
| 1061 | Group | 0.73 | 0.24 | Ditch | | |
| 1062 | Group | 0.93 | 0.4 | Ditch | | |
| 1063 | Group | 1.25 | 0.37 | Ditch | | |
| 1064 | Cut | | 0.34 | Possible ditch (same as 1003) | | |
| 1065 | Fill | | 0.34 | Fill of 1003 | | |

| <i>Trench</i> | <i>Ctxt No</i> | <i>Type</i> | <i>Comment</i> | <i>Finds</i> | <i>No./wt</i> | <i>Date</i> |
|---------------|----------------|-------------|--------------------------|--------------|---------------|-------------|
| 7 | | | | | | |
| | 700 | Deposit | Topsoil | | | |
| | 701 | Cut | Quarry Pit | | | |
| | 702 | Fill | Upper fill of 701 | | | |
| | 703 | Fill | Fill of 701 | | | |
| | 704 | Fill | Fill of 701 | | | |
| | 705 | Fill | Fill of 701(Brick Dump) | CBM | | Post-med |
| | 706 | Layer | Natural clay with flints | | | |
| | 707 | Fill | Fill of 701 | | | |
| | 708 | Fill | Fill of 701 | | | |
| | 709 | Fill | Lower fill of 701 | | | |
| 8 | | | | | | |
| | 800 | Deposit | Topsoil | | | |
| | 801 | Deposit | Subsoil | | | |
| | 802 | Layer | Natural clay with flints | | | |

AAS E - Evaluation

| <i>Trench</i> | <i>Ctxt No</i> | <i>Type</i> | <i>Comment</i> | <i>Finds</i> | <i>No./ wt</i> | <i>Date</i> |
|---------------|----------------|-------------|--------------------------|--------------|----------------|-------------|
| 1 | | | | | | |
| | 101 | Deposit | Topsoil | | | |
| | 102 | Deposit | Subsoil | | | |
| | 103 | Cut | Linear | | | |
| | 104 | Fill | Fill of 103 | | | |
| | 105 | Layer | Natural clay with flints | | | |
| 2 | | | | | | |
| | 200 | Deposit | Topsoil | | | |
| | 201 | Cut | Linear | | | |
| | 202 | Fill | Fill of 201 | | | |
| | 203 | Cut | Linear | | | |
| | 204 | Fill | Fill of 203 | | | |
| | 205 | Layer | Natural clay with flints | | | |
| 3 | | | | | | |
| | 300 | Deposit | Topsoil | | | |
| | 301 | Deposit | Subsoil | | | |
| | 302 | Layer | Natural clay with flints | | | |
| 4 | | | | | | |
| | 400 | Deposit | Topsoil | | | |
| | 401 | Deposit | Subsoil | | | |
| | 402 | Layer | Natural clay with flints | | | |
| 5 | | | | | | |
| | 500 | Deposit | Topsoil | | | |
| | 501 | Layer | Natural clay with flints | | | |
| 6 | | | | | | |
| | 601 | Deposit | Topsoil | | | |
| | 602 | Deposit | Subsoil | | | |
| | 603 | Cut | Linear | | | |
| | 604 | Fill | Fill of 603 | | | |
| | 605 | Layer | Natural clay with flints | | | |

AAS F - Flower Garden Wood Development

| <i>Trench</i> | <i>Ctxt No</i> | <i>Type</i> | <i>Comment</i> | <i>Finds</i> | <i>No./ wt</i> | <i>Date</i> |
|---------------|----------------|-------------|----------------|--------------|----------------|-------------|
| 9 | | | | | | |
| | 900 | Deposit | Topsoil | | | |
| | 901 | Deposit | Subsoil | | | |

| | | | | | | |
|-----------|------|---------|--------------------------|--|--|--|
| | 902 | Layer | Natural clay with flints | | | |
| 11 | | | | | | |
| | 1100 | Deposit | Topsoil | | | |
| | 1101 | Deposit | Subsoil | | | |
| | 1102 | Layer | Natural clay with flints | | | |
| 12 | | | | | | |
| | 1200 | Deposit | Topsoil | | | |
| | 1201 | Deposit | Subsoil | | | |
| | 1202 | Layer | Natural clay with flints | | | |

APPENDIX 2 FINDS

AAS C - Field walking

Pottery

Table 1: Pottery occurrence by number and weight (in g) of sherds

| Trans/Stint | No | Wt | Fabric |
|-------------|----|----|--------|
| A 0 -10 | 1 | 11 | 1000 |
| C 10 -20 | 1 | 2 | 1000 |
| D 50 - 60 | 1 | 3 | 300 |
| E 10 -20 | 1 | 13 | 1000 |
| E 50 - 60 | 1 | 4 | 1000 |
| E 100 - 110 | 1 | 1 | 1000 |
| F 70 - 80 | 1 | 4 | 300 |
| H 0 - 10 | 1 | 31 | 1000 |
| I 0-10 | 1 | 10 | 1000 |
| J 0 - 10 | 5 | 26 | 1000 |
| K -10 - 0 | 2 | 11 | 1000 |
| K 0 - 10 | 1 | 18 | 1000 |
| L -10 - 0 | 7 | 63 | 1000 |
| L 0 - 10 | 1 | 1 | 1000 |
| M -10 - 0 | 7 | 66 | 1000 |
| M 30 - 40 | 1 | 4 | 300 |
| N -10 - 0 | 9 | 43 | 1000 |
| O -10 - 0 | 11 | 40 | 1000 |
| O -10 - 0 | 1 | 18 | 425 |
| O 20 - 30 | 1 | 1 | 300 |
| Q -10 - 0 | 2 | 21 | 1000 |
| R -20 - -10 | 1 | 10 | 1000 |
| R -10 - 0 | 4 | 22 | 1000 |
| R -10 - 0 | 1 | 9 | 425 |
| S -10 - -20 | 3 | 16 | 1000 |
| S 10 - 20 | 1 | 1 | 1000 |
| T 0 - 10 | 2 | 4 | 1000 |
| U - 10 - 0 | 2 | 32 | 1000 |
| U 20 - 30 | 1 | 1 | 300 |
| V -10 - 0 | 1 | 12 | 1000 |
| Y -10 - -20 | 1 | 8 | 1000 |

| Trans/Stint | No | Wt | Fabric |
|-------------------|----|-----|--------|
| Z 50 - 60 | 1 | 18 | 300 |
| BB 0 - 10 | 3 | 9 | 1000 |
| BB 80 - 90 | 1 | 4 | 1000 |
| NN 0 - 10 | 1 | 1 | 1000 |
| CCC -20 - - 10 | 1 | 10 | 1000 |
| JJJ 70 - 80 | 1 | 13 | 1000 |
| Total | 82 | 561 | |

Lithics

Table 2: Summary of flint by type

| Flint Category | Total |
|---------------------------------------|-----------|
| Flake | 25 |
| Blade | 1 |
| Irregular waste | 1 |
| End and side scraper | 2 |
| Total | 29 |
| | |
| Burnt unworked flint by count | 58 |
| Burnt unworked flint by weight (g) | 859 |

APPENDIX 3 BIBLIOGRAPHY AND REFERENCES

BCC, 2004 *Brief for The Archaeological Field Evaluation and Archaeological Resource Management of Land at Luton Hoo, Hyde, Bedfordshire*, Bedfordshire County Council

Biddulph E, 2003a *Luton Hoo, Hyde, Bedfordshire: Archaeological Evaluation Report (Stage I Field-walking)*, Oxford Archaeology

Biddulph E, 2003b *Luton Hoo, Hyde, Bedfordshire: Archaeological Evaluation Report (Stage III Trial Trenching)*, Oxford Archaeology

IFA, 2001 *Standard and Guidance for archaeological evaluations*

OA, 2006 *Luton Hoo, Bedfordshire: a Written Scheme of Investigation for an Archaeological Investigations*

OA, 2005 *Luton Hoo, Hyde, Bedfordshire: Scheme of Archaeological Resource Management (Revised)*

OA, 1992 *Field Manual* (ed. D Wilkinson)

APPENDIX 4 SUMMARY OF SITE DETAILS

Site name: Luton Hoo, Hyde, Bedfordshire

Site code: LUH005

Grid reference: TL 1046 1847

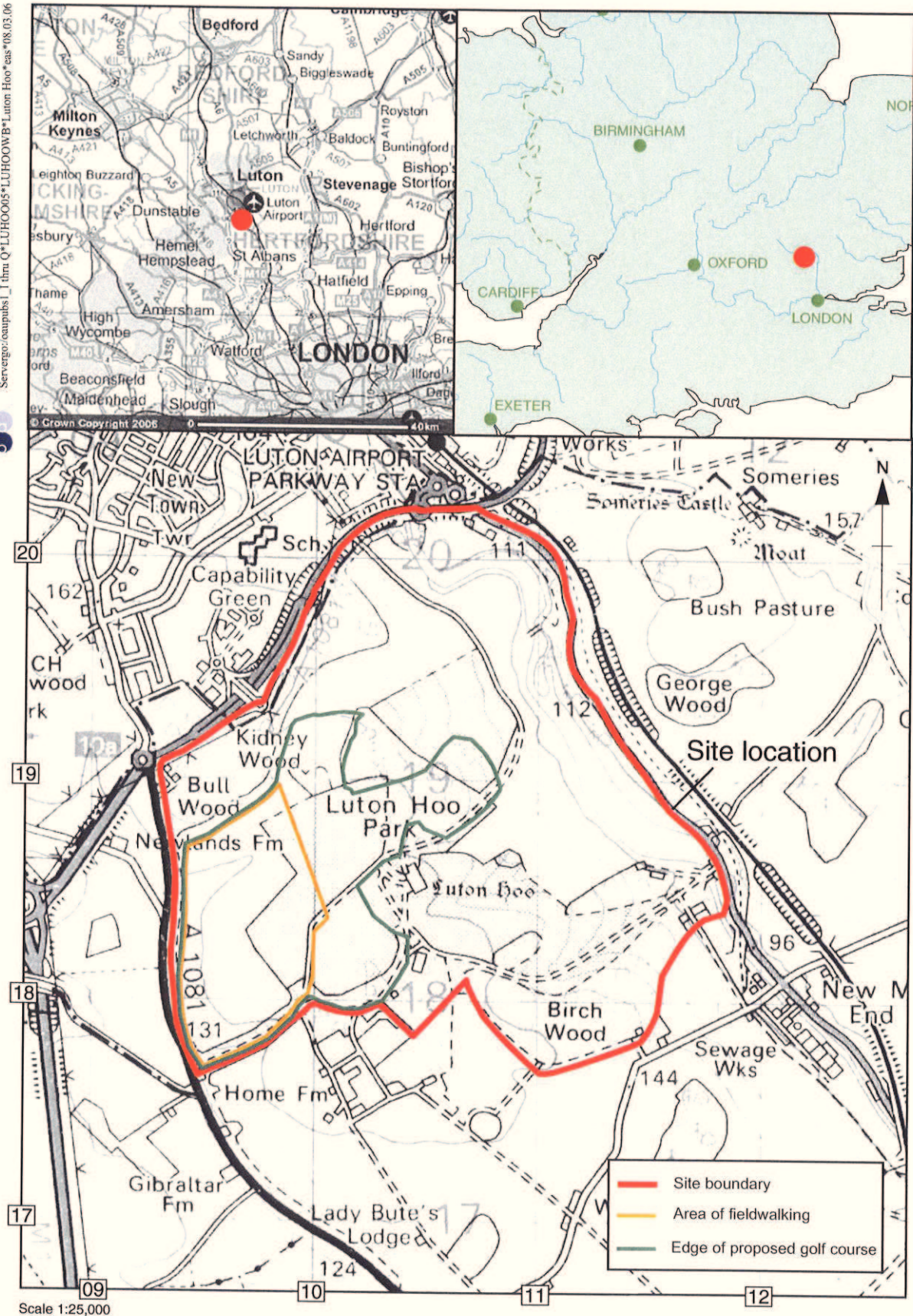
Type of project: Strip, map and sample excavation, Palaeoarchaeological investigation, Trial trenching, and Fieldwalking.

Date and duration of project: 09/01/06-10/02/06

Summary of results: . The investigations revealed a number of post-medieval features and evidence for the use of Luton Hoo during World War II. Some residual prehistoric artefacts were recovered.

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES. The archive will be deposited with the Luton Museum under accession number tbc in due course.

Servergo:\campubs\1\hmt\Q*\LUHOOWB*\LUTON_HOO*\cas*\08.03.06



Scale 1:25,000

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Figure 1: Site location

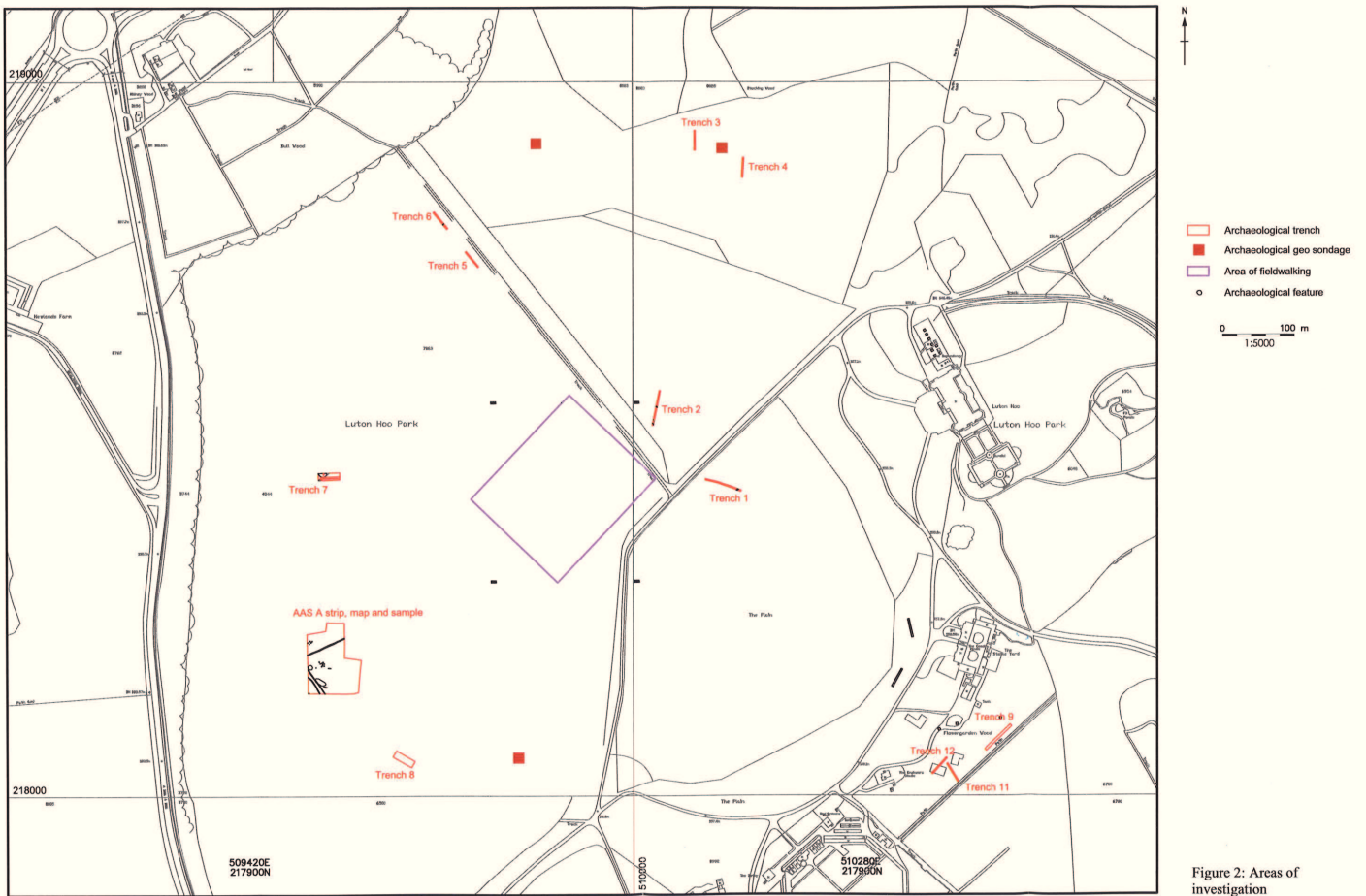


Figure 2: Areas of investigation

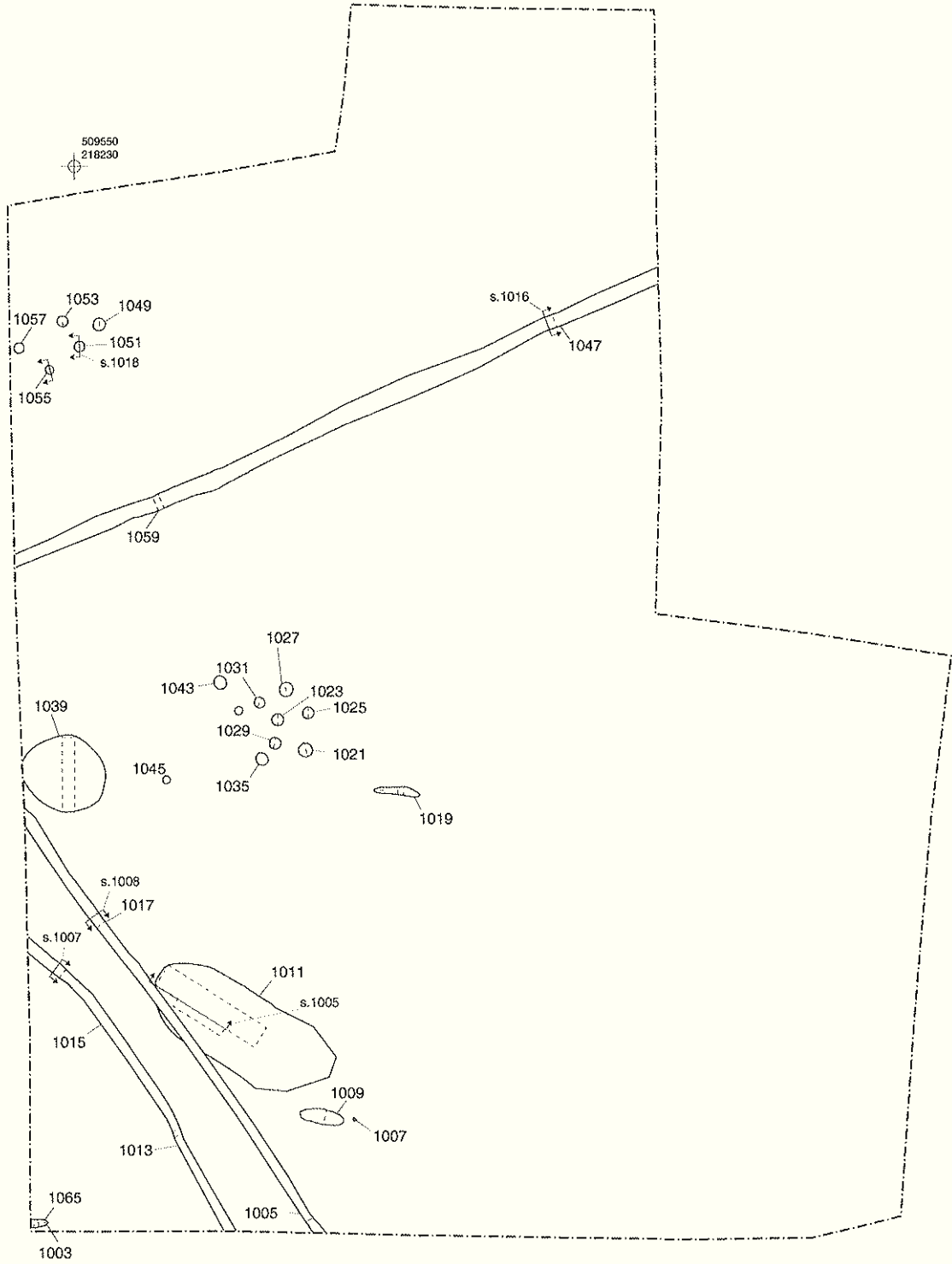


Figure 3: AAS A strip, map and sample: main area

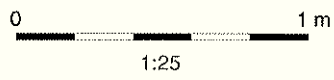
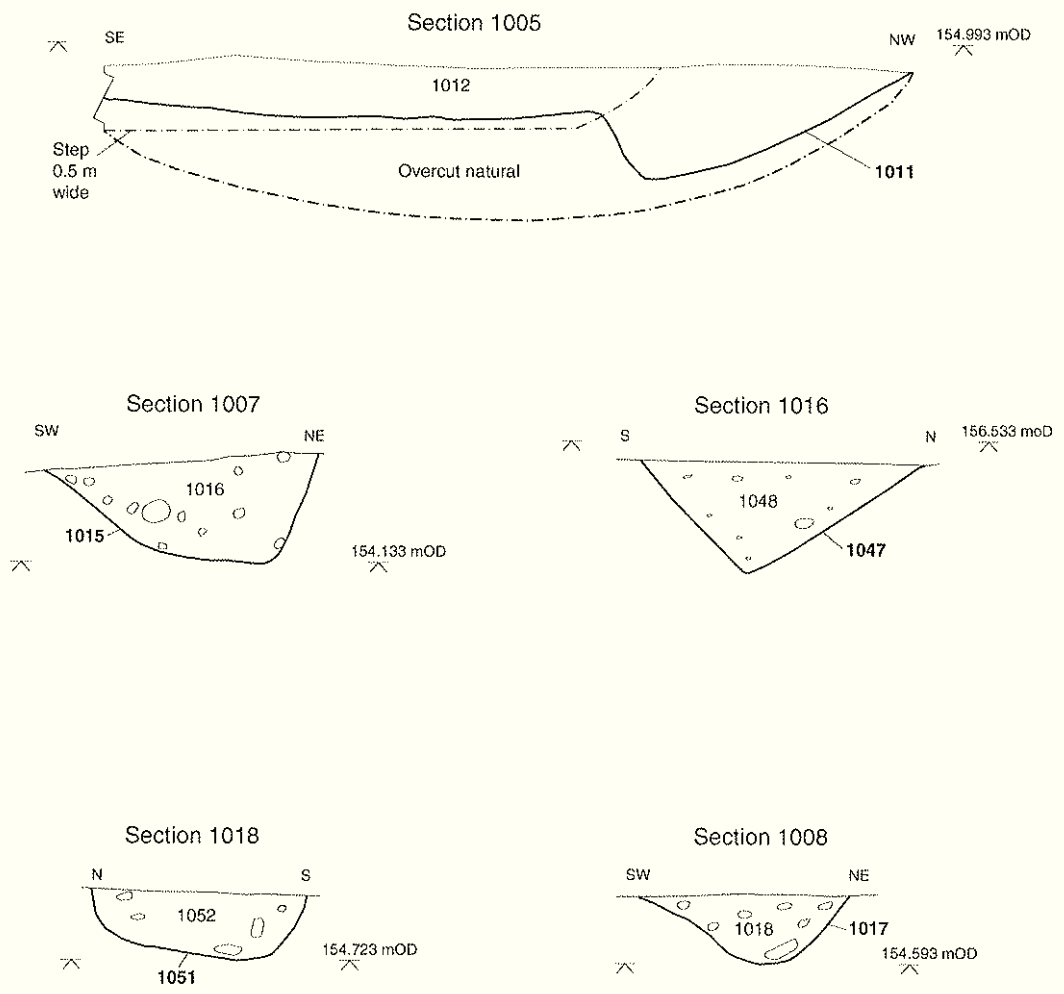


Figure 4: Main area sections

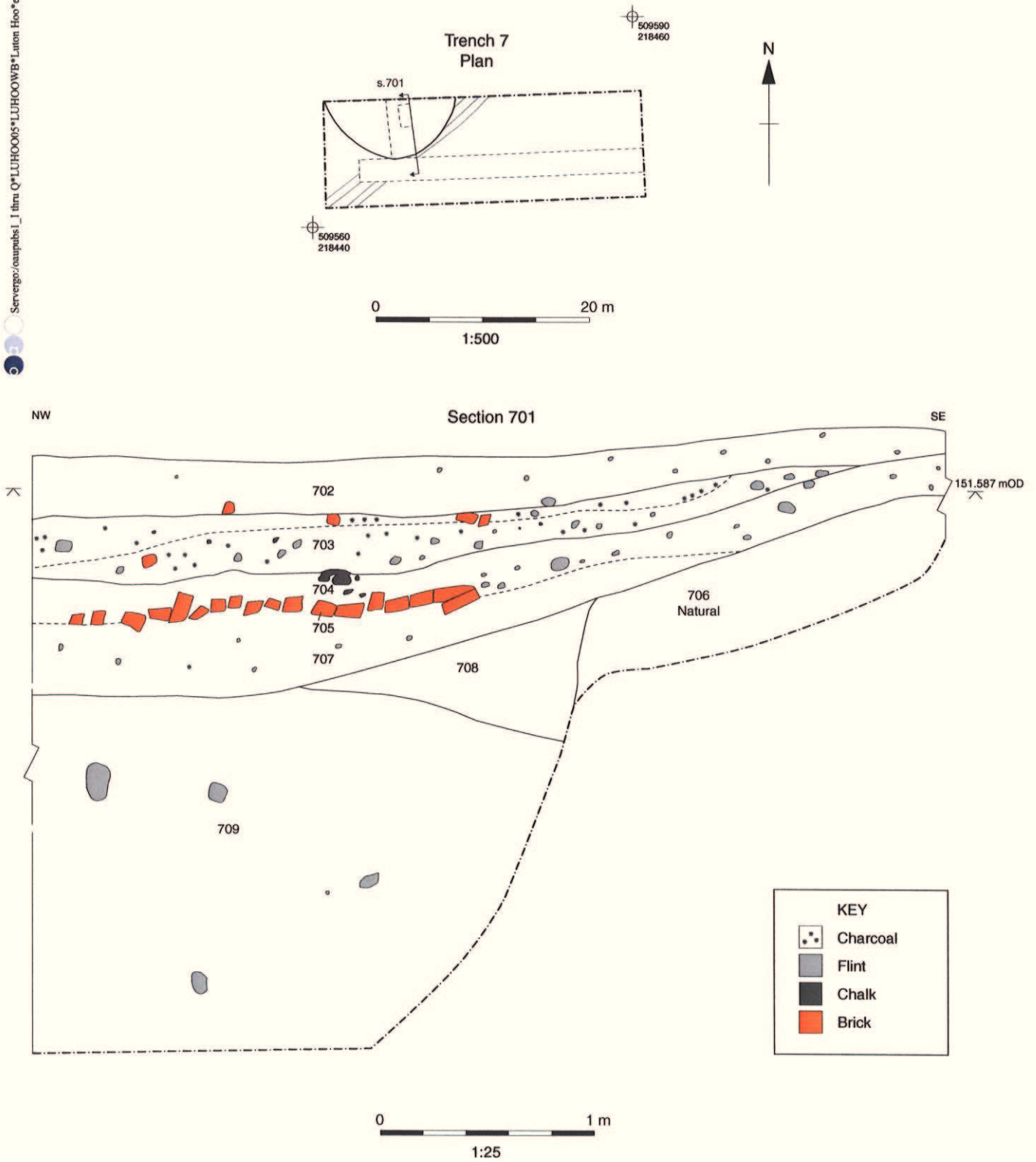
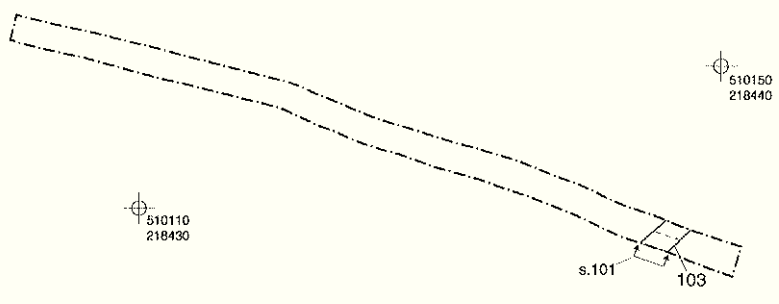


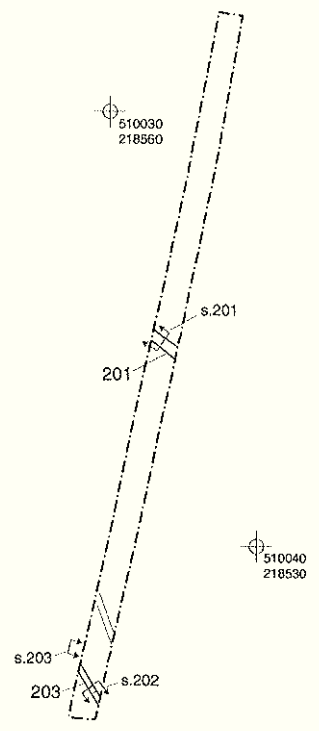
Figure 5: AAS A strip, map and sample: Trench 7, plan and section



Trench 1
Plan



Trench 2
Plan



Trench 6
Plan

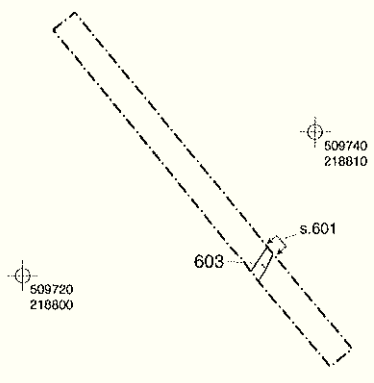


Figure 6: AAS E Evaluation Trenches containing archaeology

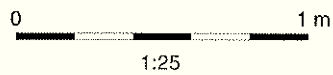
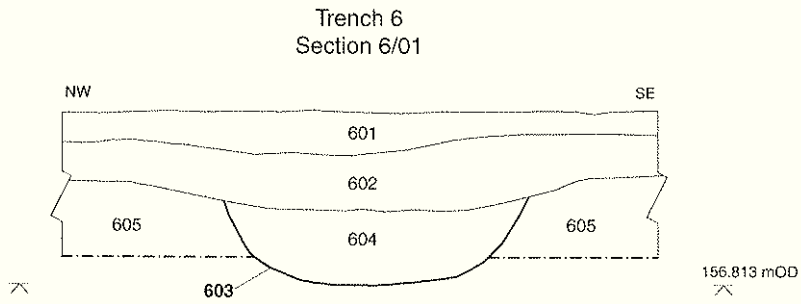
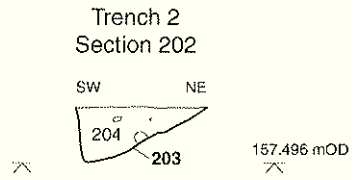
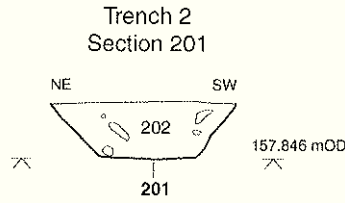
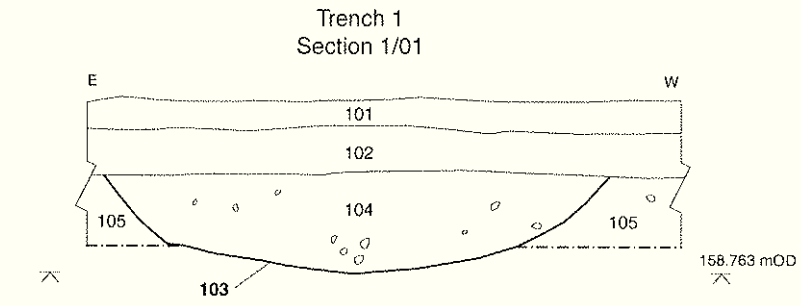
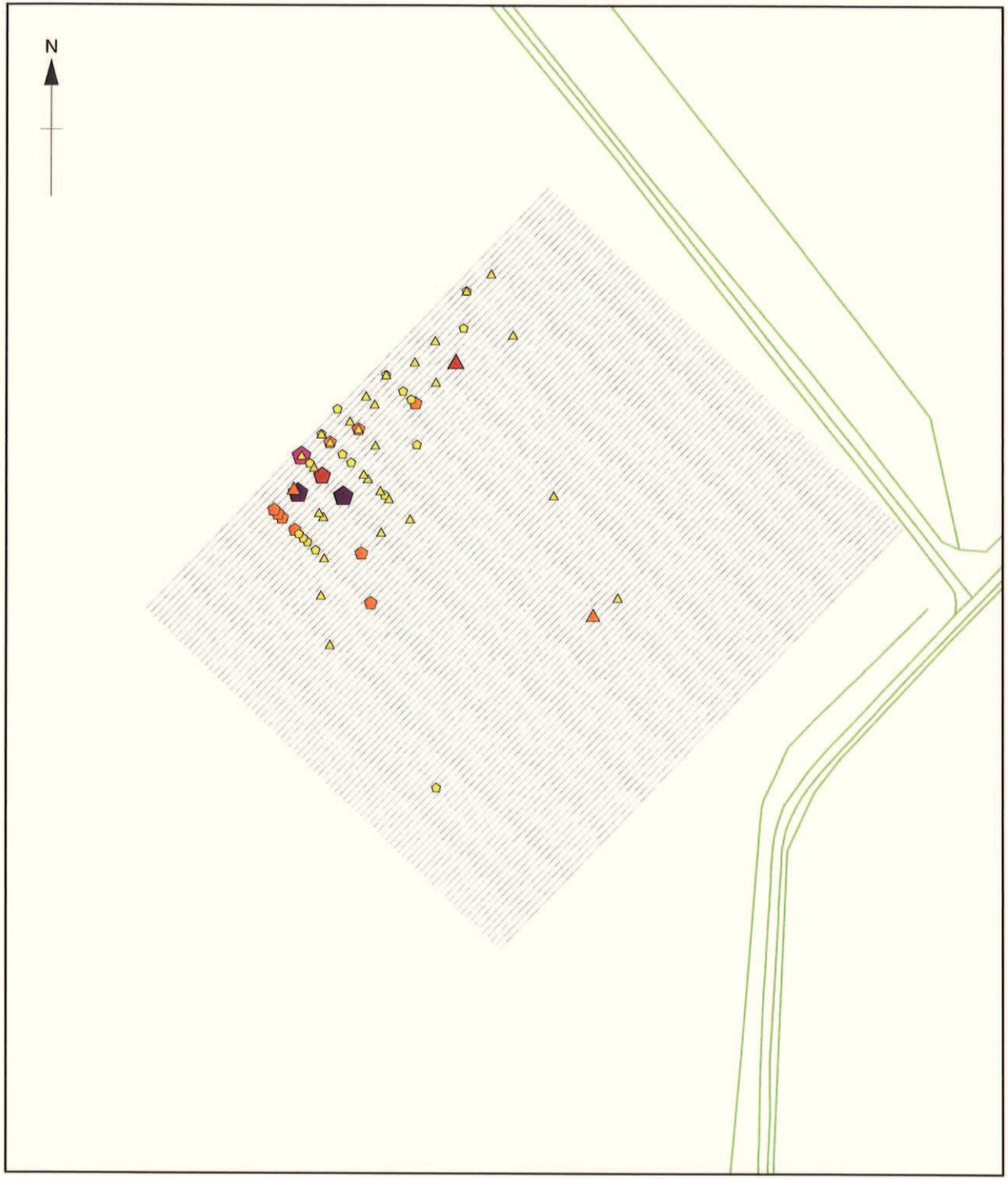


Figure 7: Trenches 1, 2 and 6, sections



Key:

| Flint Number: | Burnt flint Number: |
|-----------------------|---------------------|
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| Fieldwalking transect | 4 |
| | 5 |

0 100 m
1:2000

Figure 8: Fieldwalking results for flint and burnt flint



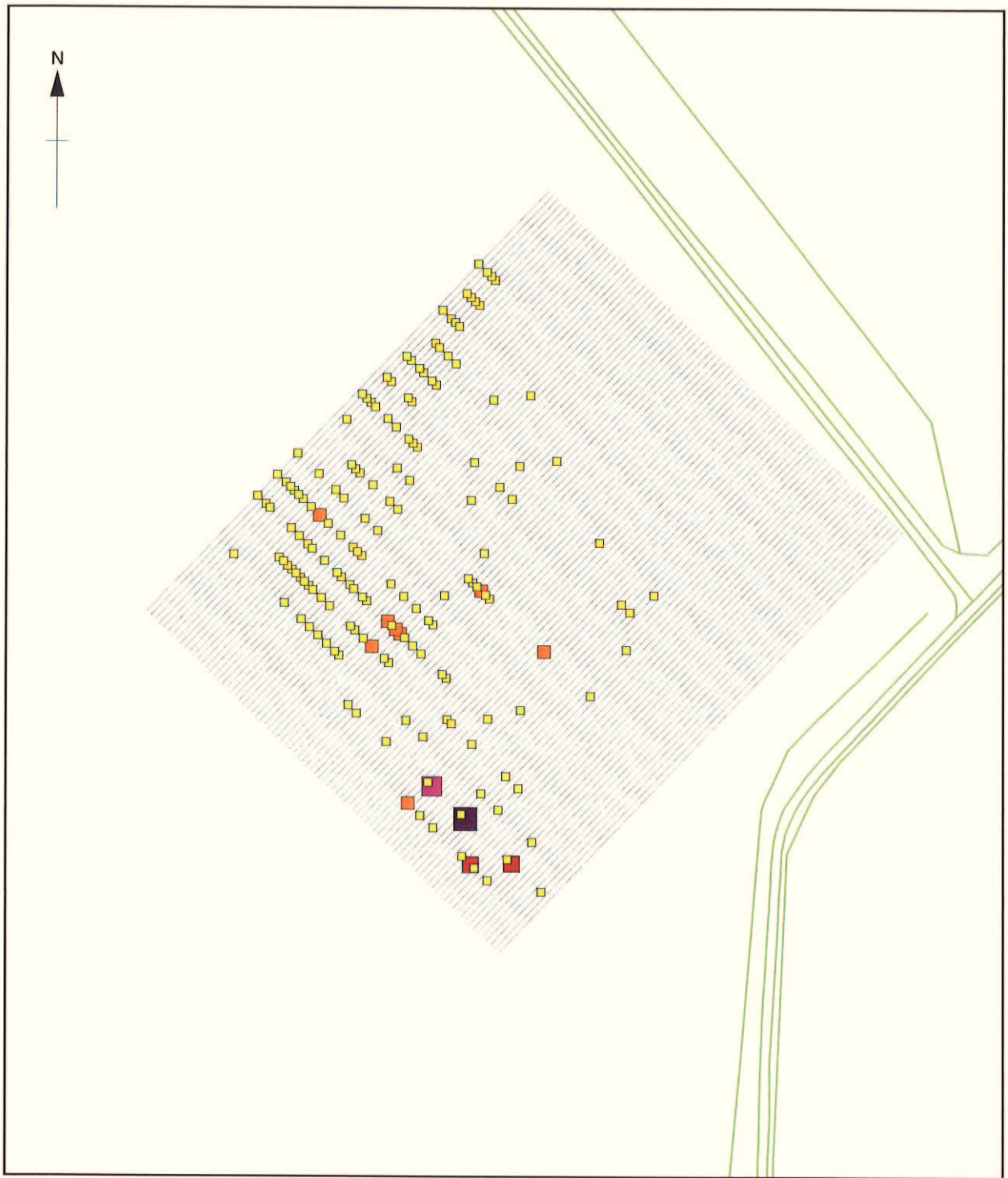
Key:

Pottery
Number of sherds:

- 1-5
- 6-10
- 10+
- Fieldwalking transect



Figure 9: Fieldwalking results for pottery



Key:

| Building material Number: |
|---------------------------|
| 1-5 |
| 6-10 |
| 11-15 |
| 16-20 |
| 20+ |

Fieldwalking transect

0 100 m
1:2000

Figure 10: Fieldwalking results for building materials



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