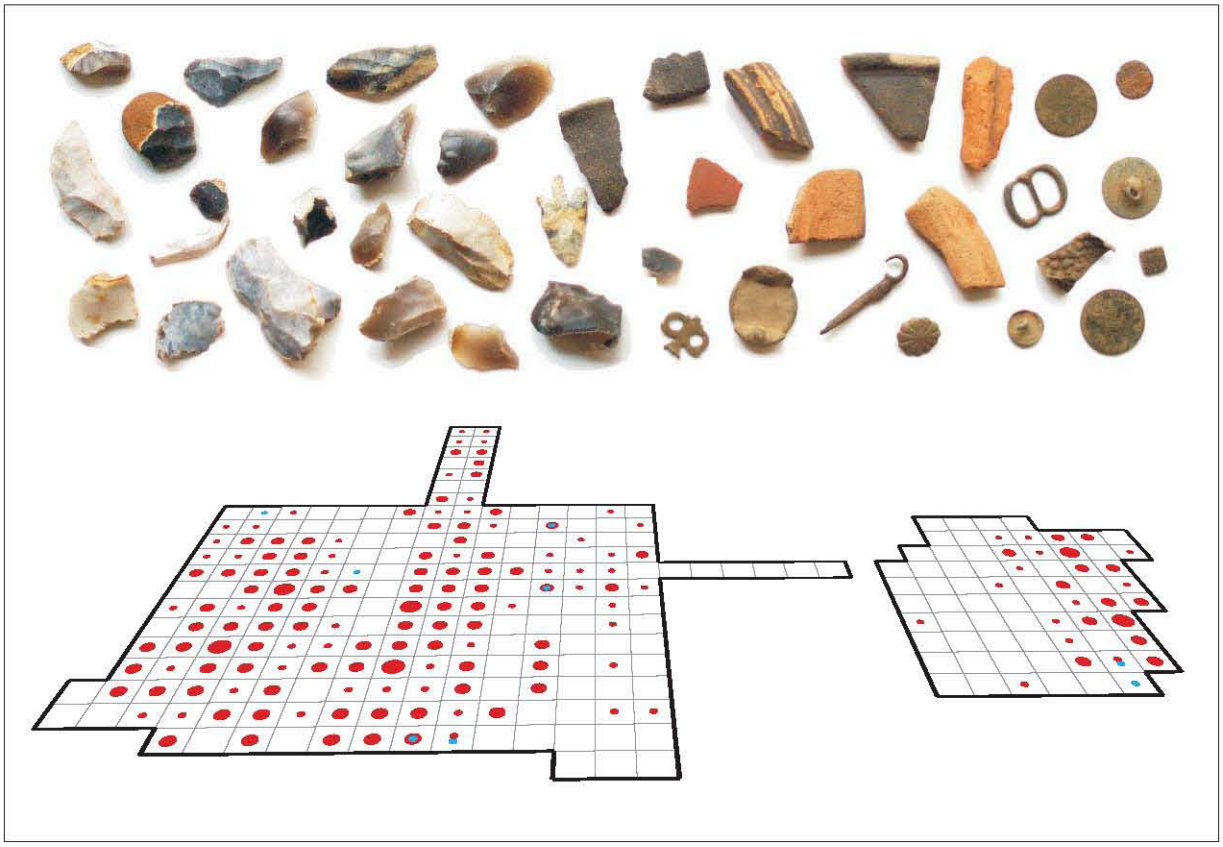
A Fieldwalking Survey of the Proposed A14 Ellington to Fen Ditton



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December 2009
Report No. 891
ECB No. 3079

EXECUTIVE SUMMARY

Two phases of fieldwalking were undertaken along the proposed Scheme during March and April 2009 in order to recover artefacts from the topsoil and thereby plot the location of past human activity and occupation. This work recovered assemblages of artefacts spanning the Mesolithic to Medieval periods, with clear indicators of Roman and Anglo-Saxon settlements being found as well as substantial evidence of a Mesolithic/Neolithic 'activity area' adjacent to the River Ouse.

The results of the study have provided new information with which to inform future evaluation trenching and confirmed the location and character of other sites which have previously been indicated by geophysical survey and air photo study. The results have provided further information with which to model the character of prehistoric occupation within the Scheme and how this may have differed between clay and gravel geologies and different topographic settings.

Evidence of Mesolithic / Early Neolithic activity was found at a number of locations, predominantly on the terrace gravels. Site 1/Field 10 contained a small number of worked flints, comprising seven flakes collected during Phase 1 and a further six recovered from Phase 2. Site 3 East/Field 18, produced a small assemblage of worked flint of this period whilst the most substantial assemblage came from Site 3 West/ Fields 17 and 17a which produced a large collection of Mesolithic/Neolithic worked flint, apparently being part of an 'activity zone' on higher ground within the River Ouse floodplain. On the Boulder Clay, Field 28 produced a small assemblage of Mesolithic material and on Lower Greensand at Field 72a, a small assemblage of worked flint, including several blades, indicated the continuation of a previously recorded flint scatter.

Evidence of later Neolithic/Bronze Age activity was again highlighted by flint scatters on the gravel terraces. This included a sizable assemblage from Site 1/Field 10 and a small assemblage from Site 2/Field 15. Site 3 East/Field 18 produced a small assemblage, which included a complete barbed and tanged arrowhead, dating to the earlier Bronze Age. A moderate assemblage of later Neolithic/Bronze Age flint was collected from Site 3 West/Fields 17 and 17a. A small quantity of flake material was also recovered on the Boulder Clay at Field 28 and the Lower Greensand at Field 72a.

Roman pottery was identified in several of the fields. Site 1/Field 10 contained a small quantity of Roman pottery totalling seven sherds, while three sherds were collected from Site 2/Field 15. A more sizable assemblage totalling 24 sherds a dating 2^{nd}-4^{th} century AD were collected from Site 3 East/Field 18, along with a small quantity of Roman tile, indicative of a building/structure in the vicinity. A 4^{th} century AD coin was also recovered during the metal detecting. A much smaller quantity of Roman pottery was collected from Site 3 West/Fields 17 and 17a, suggesting the Roman settlement did not extend that far west.

Finds dating to the Saxon period were recovered from Site 1/Field 10, including nine pottery sherds from Phase 2. An Early to Middle Saxon date is suggested; no Saxon metalwork was recovered. Recovery of this ceramic material during fieldwalking is unusual and does suggest occupation somewhere in the near vicinity (perhaps partly disturbed by a nearby borrow pit).

Evidence dating to the medieval period was recovered from several sites during the fieldwalking. A small pottery assemblage totalling 12 sherds were recovered from Site 1/Field 10, including three 14th century sherds and nine 15th century sherds. A small quantity of medieval metalwork was also recovered from this field, including a 14th century AD buckle pin. 26 sherds were collected from Site 3 East/Field 18, while 27 sherds were recovered from Site 3 West/Fields 17 and 17a. A small quantity of medieval metalwork work was also collected from this field. It is likely however, that most of the medieval finds are the result of field manuring rather than necessarily being proof of actual occupation sites.

CONTENTS

FIGURE LIST

LIST OF TABLES

LIST OF CHARTS

INTRODUCTION

This report outlines the results of fieldwalking along the route of proposed improvements to the A14 road ('the Scheme', see Figure 1), undertaken between 23rd March and 8th April 2009 on behalf of Costain Skanska Joint Venture for the Highways Agency. The fieldwalking was divided into two phases, which aimed to first identify and then investigate potential archaeological sites along the planned route. The work was undertaken in accordance with a Written Scheme of Investigation for evaluation through fieldwalking and trenching (Standring and Evans 2009).

The first phase of fieldwalking comprised a double line transect which was walked along the part of the proposed route between Ellington and Girton (between NGR 541700, 261270 and NGR 518800, 271900). The walking included areas of the proposed footprint and to include all associated and ancillary works. This work was undertaken in order to identify artefact scatters indicative of potential archaeological sites that would be examined by further more detailed fieldwalking investigation (grid walking for total area collection). The total area of land within the footprint of the scheme was 273.3 hectares. Of this total, the transect phase examined, **65.7 %** of the land by area. Of the remaining land, **25.5%** was either long crop or grass so results were not observed and **8.8**% was not accessed, including areas of former quarrying, grass and long crop. In total 76.05 km of transects were walked (see Figures 3 to 23 for results). The site code was A14 09.

During the transect phase, three main areas were identified as having a higher than average number of finds that warranted further investigation as potential archaeological sites. These three areas were identified within fields **10, 15, 18** and **17/17a** being identified respectively as **Site 1, Site 2, Site 3 East** and **Site 3 West** in the further investigation (the latter two being separated by the East Coast Main Line). These sites were selected for intensive grid fieldwalking investigation (Total Collections) covering a total area of 6.42ha. A further eight small 'Test areas' were also grid walked. These comprised lithic find spots or limited artefact scatters in a number of fields on Clay geology. A total of 1.75ha of test areas were walked; however, none of these areas yielded artefact scatters that justified judgmental expansion into larger collection sites. Two small lithic scatters were located within fields **28** and **72**, the assemblages identified as **FD 28c** and **FD 72a** respectively**.** A single field (**45**) contained a small lithic scatter on a gravel terrace that was not available for grid walking.

Aims and Objectives

The general aims of the fieldwalking study were as follows:

- To non-intrusively sample as much of the Scheme and associated infrastructure as possible between Ellington and Fen Ditton in order to further assess the overall archaeological potential of the route.
- To identify new 'sites' and activity areas that could be tested by further fieldwalking and / or evaluation trenching.

- To identify 'sites' or episodes of activity that may only be present in the ploughsoil ('topsoil archaeology') such as prehistoric lithic scatters.

Specific research objectives were defined as follows:

- To enhance the results obtained by air photo plotting and geophysical survey by further study of areas where likely archaeological remains have already been identified and to locate / date remains that might not be visible through those survey methods.
- To walk proposed trenching areas of known 'sites' in order to assist with the better definition / location of evaluation trenching.
- To provide comparative information on the potential / character of archaeological remains on the gravel and clay areas.
- To provide detailed information for comparison with subsequent evaluation trenching in order to understand which types of site are visible / invisible through fieldwalking or trenching.

Results Summary

A variety of artefact scatters and findspots were identified during Phase 1 (Appendix 1 and 2, Figs 1-23), with the gravel terraces between Brampton and the River Ouse providing the greatest quantity of artefacts that required subsequent investigation by total collection (identified as Phase 2, Sites 1-3).

Phase 2 walking aided in understanding the extent, character and relative importance of scatter sites as indicators of buried archaeology that could be tested by subsequent evaluation trenching. The gravel terraces yielded evidence of prehistoric flint scatters (Sites 1, 2 & 3), Roman pottery (Sites 1, 2 & 3) and Saxon pottery (Site 1) sites. Medieval and Post-medieval finds were thought to indicate field manuring practices. Test walking of smaller find spots / scatters on the clay located small prehistoric lithic assemblages within Fields 28 and 72, identified as FD 28c and FD 72a as well as small quantities of flint at **FD 61a, FD73a and FD 76a.**

Field No.	Site	Grid Ref	Site size (ha)	Worked flint	Roman Pot	Saxon Pot	Med Pot
10	1	TL 196696	0.91	60	7	9	12
15	2	TL 201688	0.59	24	3	0	2
18	3 East	TL 224682	2.04	80	24	0	26
17 and 17a	3 West	TL 220683	2.88	364	4	0	27
28	FD 28a	TL 2590 6758	0.06	1	0	0	0
28	FD 28b	TL 2590 6758	0.09	1 burnt	0	0	0
28	FD 28c	TL 2590 6758	0.3	11	0	0	0
61	FD 61a	TL 3654 6487	0.09	2 burnt	0	0	0
72	FD 72a	TL 3911 6353	0.4	14	0	0	0
73	FD 73a	TL 3925 6346	0.38	3	0	0	0
76	FD 76a	TL 3942 6287	0.18	3	0	0	0

Table 1: Summary of Total Collection sites

Site 1

Site 1 (Field 10) was situated on the Brampton 1st/ 2nd terrace gravels (centred TL 196696, Figure 5) within a zone of proposed evaluation trenching, *Area B1* (Standring and Evans 2009). Finds of both Neolithic flint (Figure 24) and Saxon pottery (Figure 26) provide valuable indicators of occupation sites that will assist in planning the location of evaluation trenches. Roman pottery finds (Figure 25) were thought to be background noise from nearby enclosure / settlement features that had been identified by geophysical survey (Preconstruct Geophysics 2008) and air photo study (Palmer 2003). Medieval and Post-medieval pottery and metalwork were thought to be indicative of agricultural practices and wider landscape activity (Figures 27, 28, 29).

Site 2

Site 2 (Field 15) was situated on the Brampton 1st/ 2nd terrace gravels to the south of Brampton village (centred TL 201688, Figure 6). Finds of Neolithic / Bronze Age flint (Figure 30), Roman pottery (Figure 31) and medieval / Post-medieval pottery (Figures 32 and 33) were thought to represent only 'background noise' of localised flint working and Roman / medieval agriculture.

Site 3

Site 3 was situated on the Ouse-side 1st/2nd terrace gravels just north of Offord Cluny at the geological junction with the Boulder Clay. Bisected by the East Coast Main Line, the extensive artefact scatters was divided into Site 3 East (centred TL 224 682, see Figure 8) and Site 3 West (centred TL 220 863, see Figure 8).

The eastern site corresponded with proposed evaluation trenching Area *C1* (Standring and Evans 2009) and comprised both a prehistoric lithic and Roman pottery/tile scatter. The latter was mostly of 3rd/4th century date closely related to features identified by geophysical survey and air photo study (*ibid*) and was therefore only sample investigated, to include the location of an adjacent proposed balancing pond (Figure 35). The Late Neolithic / Bronze Age flint scatter (which included a barbed and tanged arrowhead) was found to be concentrated closer to the rail line, becoming diffuse towards the east where the land rose up onto the Boulder Clay (Figure 34).

The western site included proposed evaluation trenching Area C2 (Standring, *ibid*) and a neighbouring field. A continuation of the Bronze Age / Neolithic lithic scatter from Site 3 East (Figure 34) was found along with an apparent 'Island' at least partly surrounded by alluvium that contained an extensive lithic scatter of Mesolithic and Neolithic date. The 'island' was apparently covered with medieval ridge and furrow cultivation remains until comparatively recent date (Palmer 2003), and geophysical survey (Bartlett 2009) located both field boundary ditches and a series of pits some of which may be prehistoric in date.

Test Areas 28c and 72a

Field 28 which was situated on the Boulder Clay at TL 2590 6758 yielded eleven pieces of struck flint including two diagnostic flint blades from the Mesolithic / Early Neolithic and flakes from the Neolithic / Early Bronze Age. The potential for 'inland' Mesolithic activity away from the major river valleys has been noted elsewhere in Cambridgeshire (e.g. Evans 2006) and in this case, the field is located adjacent to a 'plateau' above a small river valley some 800m to the south which connects to the River Ouse some 4km to the west.

Field 72 which was situated on the geological boundary between Gault Clay and the Lower Greensand at TL 3911 6353, yielded fourteen pieces of worked flint including four flint blades from the Mesolithic / Early Neolithic and a Late Neolithic / Early Bronze Age end scraper (all at test walking area FD 72a). These results relate closely to other known Mesolithic flint scatters on the Greensand deposits that surround Oakington Brook. A scatter of Mesolithic flint was located by Cotswold Archaeology during fieldwalking immediately south west of Slate Hall Farm, some 150-200m from FD 72a (HER 7796, Evans 2006, Site I). In the wider vicinity, evaluation trenching undertaken in connection with the proposed Northstowe development located a further Mesolithic site adjacent to Oakington Brook, some 1km north east of FD 72a (Evans 2006, Site XXVIII).

METHODOLOGY AND FIELD CONDITIONS

Phase 1: Transect Walk (David Hall)

Two transects were walked along the entire Scheme route and associated works covering a total linear distance of 76km. These were forward and return transects divided into different lengths either side of convenient access points from existing roads and tracks. The transects were placed at the quarter widths of the Scheme, but this deviated where ancillary bridges and balancing ponds were included.

A surveyor walked in front guided by a GPS and the field-searcher walked behind in wide sinusoidal curves to achieve a good coverage of the ground surface, viewing at a distance of 15m or closer (Figure 2). Artefacts were plotted using the GPS. At Offord Cluny (Site 3), where there were lithic scatters and a Roman site, the extent of the site as measured by surface finds was determined. Most artefacts were left on the ground surface for subsequent gridded pick-up.

Each field was given a sequential number and notes made about the geology, ground condition and crop visibility, *etc* (Appendix 1-3). Daylight was good for the whole of the project and the weather kept fine. Ground surface visibility has been graded on a scale of 1-5;

> 1 – This grade applies to fields which had no or very limited visibility, specifically fields with a large crop coverage, of high crops such as rape, and also fields which were covered by grass. A total of 27 fields were graded 1.
>
> 2 – Grade 2 fields had poor to very poor visibility, often with thick winter corn, or rape, although it was not as high or widespread as that from grade 1 fields. 13 fields were graded 2.
>
> 3- The visibility in grade 3 fields was fair to good, with some winter corn coverage, although not to the same extent as grade 2. A total of 25 fields were graded 3.
>
> 4 – Grade 4 fields comprised those which contained only a small amount of crop, which was characterised by short winter corn. The visibility was therefore good. 23 fields were graded 4.
>
> 5 – This grade applies to fields which had very good visibility, with only a very small amount of crop, or no crop at all. All of these fields were well weathered. Three fields were graded 5.

Fields that could not be assessed because of crop cover with grass, long rape or long winter corn were: 8, 9, 14, 16, west of 17, 20-21, 25-6, 30, 32, 36, 44, 46-51, 57, 58, 69-71, 83-87. In total, 65% of land within the Scheme boundaries was observed. Of the remaining 35%, c.10% of the total Scheme is grass that includes 'ancient' permanent pasture with ridge and furrow remains, modern pasture and areas of infilled quarries. The remaining 25% comprised unsuitable crop conditions – much of it being advanced rape fields, including significant areas on Boulder Clay adjacent to the A1198 and on gravel terrace adjacent to Conington village.

Phase 2: Total Collections

Two stages of Total Collection were undertaken. The first focusing on the 'sites' identified during Phase 1, the second on the stray finds and small scatters found on Clay geology in order to see if these became larger scatters and indicative of actual 'sites' that warranted further total collection and evaluation trenching.

A 10x10m grid was laid out across each field, aligned on the National Grid, thus producing a series of 10x10m squares. Each square was walked starting in the southwest corner, walking to the northern point and then back to the south and repeated, so that the entire square was walked. Finds were labelled according to the number in the southwest corner of the square (the point of origin).

A metal detecting survey was carried out in Sites 1, 3 East and 3 West, in order to retrieve artefacts from the topsoil prior to the machine stripping of the subsequent evaluation trenches. As well as contributing datable finds, assessing the topsoil assemblage can also pinpoint activities that may not register with traditional earth-fast archaeological features ('ploughsoil archaeology')..

The survey was conducted in tandem with the fieldwalking along transects running north - south, spaced at 10m intervals. The transects were walked at a slow pace with the sweep covering 1.5-2.0m, using XP detectors. If artefacts of interest or groups of significant artefacts were encountered along the transects, then allowance had been made for intensive 100% survey over the surrounding grid squares. This, however, was not deemed necessary on these sites. The survey was carried out by two experienced detectorists from the Cambridge Archaeological Unit. Throughout the survey, with the exception of the first two transects of Site 1 (see below) small iron objects were discriminated out, and very recent objects of little or no archaeological significance, such as milk bottle tops, ring pulls, modern shotgun cartridges etc were collected but discarded prior to finds assessment.

The conditions for fieldwalking and metal detecting were good, as the fields were ploughed with some weathering and only small crop growth present. The furrows had weathered sufficiently to provide a relatively flat detecting surface. The weather conditions were also preferable, being predominately overcast, with some clear spells, thus making visibility good.

The test areas take their field number from the initial phase, together with "a", "b" or "c" allocated to distinguish separate areas within the same field. In each case the 10x10m grid was set out, aligned with the proposed road route and total collection was undertaken. Metal detecting was considered, and rejected, for each area-based on the artefacts discovered during the fieldwalking. In total, 175 10x10m squares (1.75ha) were walked in the test areas.

RESULTS

Phase 1: Transect Walk

The results were plotted on a route map and entered into a GIS system. Major artefact concentrations were given 'site' numbers and subjected to further work. Material later than AD1500 was not routinely collected unless it was deemed to be part of a significant scatter or 'site'.

The main sites discovered were Middle Saxon near Brampton (F10), a lithic scatter and Roman site north of Offord Cluny (Fields 17, F17a, and F18) and a further flint scatter in Field 15. Smaller flint scatters were recovered from fields near the A1198 (Field 28), Connington (Field 45), and Slate Hall Farm near Bar Hill (Field 72), as well as Fields 61 and 76. Stray finds were recovered from several fields including 1,12,19,21,23 and 29. Many sites lie on sandy-gravel soils near to a water supply.

Appendix 2 details a list of finds from these fields. The majority of finds being worked flint, these are summarised below. Other significant finds (Roman and Saxon pottery) have been reported with the more extensive data from the Phase 2 total collection sites 1-3. In total, 14 sherds of Medieval / early Post-Medieval pottery were recovered from transects, of which 5 came from fields which were subject to grid walking and are also discussed below in more details. The remaining 9 sherds were considered to be evidence of field 'manuring' practices rather than reflecting evidence of 'sites'.

Evidence of Medieval cultivation in the form of surviving Ridge and Furrow earthworks was noted in three pasture fields– **16, 44** and **84**. This is unsurprising given the extent of known medieval agriculture in the region, however this survival is becoming less common in Cambridgeshire due to the post-war intensification of arable regimes.

Flint (Lawrence Billington)

Initial fieldwalking along the A14 route recovered a total of 89 worked flints. The assemblage was recovered from 20 locations, generally individual fields, which were occasionally subdivided. The assemblage is described by location below, (see Figs 4-23).

Field	**subdivision**	chip	chunk	flake	blade	blade like flake	gunflint	retouched flake	scraper	leaf shaped arrowhead	blade core	flake core	**total worked flint**
1	S		1										**1**
2							1						**1**
7						1							**1**
10	NE			7		1							**8**
11				2									**2**
15			1	5	1								**7**
17		1		3		2					2		**8**
17	a			5	2	1							**8**
18	1		1	5					1	1			**8**
18	2			6		1						1	**8**
19				1									**1**
19	2			1									**1**
21				1									**1**
23				1									**1**
28			2	3		1							**6**
29				1									**1**
33				1									**1**
34				1									**1**
35			1	1									**2**
38				1									**1**
40				2					1				**3**
41								1				1	**2**
42				1									**1**
45				4									**4**
62				3					1				**4**
64	a			1									**1**
72				1	2						1		**4**
76											1		**1**
76	a			1									**1**
		1	6	58	5	7	1	1	3	1	4	2	**89**

Table 2: All flint from the initial phase of fieldwalking

Field 1
A single undiagnostic chunk.

Field 2
An Old English Gunflint. Formed by steep retouch on the proximal end of a short wedge shaped flake this form of gunflint was commonly used in the 18th century prior to the large scale, standardised, production of gun flints at centres such as Brandon, Norfolk (Skertchly 1879: 36, figs 20 and 58). Similar forms were also used a strike lights throughout the Post-Medieval period.

Field 7
The distal end of a blade like flake, possibly of Neolithic date.

Field 10
Seven flakes and a blade like flake. The flakes are all hard hammer struck from unprepared platforms. Most are broad and thick and reflect an expedient flake based technology probably of Bronze Age date.

Field 11
Two small undiagnostic secondary flakes.

Field 15
Five flakes and blade, all broken. The blade suggests some Mesolithic or earlier Neolithic activity.

Field 17
A chip, three flakes, two blade like flakes and two blade cores. This small assemblage is strongly suggestive of Mesolithic or earlier Neolithic activity in this area.

Field 17a
Five flakes, two blades and a blade like flake. This group appears to represent both Mesolithic/earlier Neolithic activity in the form of blade based products and later Neolithic/Bronze Age activity as represented by an expedient hard hammer flake industry.

Field 18
One chunk, 11 flakes, a blade like flake, an end scraper, a keeled core and a broken leaf shaped arrowhead. A chronologically mixed group. Earlier Neolithic activity is attested by the leaf shaped arrowhead and possibly by the keeled core. Some of the flakes may be associated with this but some is likely to be later in date. The end scraper has been manufactured on an already old large primary flake, the scraper retouch cutting a light patination and may represent Bronze Age scavenging of earlier lithic material.

Field 19
Two undiagnostic secondary flakes.

Field 21
A single undiagnostic secondary flake.

Field 23
A single undiagnostic secondary flake.

Field 28
Two chunks, three flakes and a blade like flake. None of the material is strongly diagnostic but is typical of later Neolithic/Early Bronze Age flake based technologies.

Field 29
A single undiagnostic tertiary flake.

Field 33
A badly burnt tertiary flake.

Field 34
A single undiagnostic secondary flake.

Field 35
A chunk and an undiagnostic secondary flake.

Field 38
A single undiagnostic secondary flake.

Field 40
A scraper and two undiagnostic flakes. The crude working evident on the scraper suggests a late prehistoric date.

Field 41
A multiple platform flake core, probably late Neolithic/early Bronze Age and a retouched flake, potentially of Neolithic date.

Field 42
A single undiagnostic secondary flake.

Field 45
Four hard hammer struck flakes consistent with later Neolithic/early Bronze Age technologies.

Field 62
A crude (probably late prehistoric) scraper and three undiagnostic flakes.

Field 64a
A single undiagnostic secondary flake.

Field 72
Two fine blades, a flake and blade core, all relating to Mesolithic/earlier Neolithic activity.

Field 76
A nodule of good quality flint with a two blade removals of Mesolithic or earlier Neolithic date
.
Field 76a
A single undiagnostic secondary flake.

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Fields 1, 19, 21, 23, 29, 34 and 38 each contained a single undiagnostic worked flint Fields 11 and 35 each contained two undiagnostic worked flints.

The majority of the locations produced small amounts of undiagnostic flake-based debitage which can tentatively be attributed to later prehistoric flint working. Mesolithic or earlier Neolithic activity is represented by material from fields 15, 17, 18, 72 and 76.

Phase 2: Total Collections

Site 1

Site 1 is located approximately 1km to the southwest of Brampton, adjacent to the northern carriageway of the A1 (centred TL 196696, see Figs 5 and 24-29). The field is located on 1st/2nd Terrace gravels which sloped southwards towards a small stream, with a ridge in the eastern corner. The grids covered a total area of 0.91ha, with a total of 83 squares walked (0.83ha), and 87 Transects were metal detected.

The field conditions were very good. There was virtually no crop, with an estimated coverage of no more than 10% of the site. The visibility was very good, with clear to overcast weather conditions making finds easily visible.

Flint (Lawrence Billington)

The fieldwalking of Site 1 produced 60 worked flints weighing 237.9g together with six unworked burnt chunks of flint weighing 89.1g. Few chronologically diagnostic worked forms were recovered but

the technological traits of the material suggest the assemblage can be coarsely separated into two industries, the first dominated by blade products and dating to the earlier Neolithic or Mesolithic and the second characterised by flakes of varied morphology representing activity from the later Neolithic into the Bronze Age.

Grid square	chip	flake	blade like flake	blade	scraper	chisel arrowhead	**total of worked flint**	**Unworked burnt chunk**
A5		3		1			**4**	
A6		1					**1**	
A13		1					**1**	
B5		1					**1**	
C4	1						**1**	
C5		1					**1**	
C6				1			**1**	
C7	1						**1**	
C10					1		**1**	
D5		2				1	**3**	
D6		1					**1**	
D7		2					**2**	
D13		2					**2**	
E3					1		**1**	
F7		1					**1**	2
F8		1					**1**	
F10					1		**1**	
F12		1					**1**	
G3		1					**1**	
G5			1				**1**	
G6		1					**1**	
G13		2		1			**3**	
H3		1					**1**	
H5	1	1					**2**	
H8		1					**1**	
I3		1					**1**	
I5		1					**1**	
I8		2					**2**	
J6		2					**2**	1
J8		1	1				**2**	
K3		1					**1**	
K4		1					**1**	
K5		1					**1**	
K6		1					**1**	
K8		2					**2**	
L4				1			**1**	
L5		2					**2**	
L7		1					**1**	
L8	1	2					**3**	
M4		2					**2**	2
O4		2					**2**	1
Totals	**4**	**46**	**2**	**4**	**3**	**1**	**60**	**6**

Table 3: Flint from Site 1

The flint is generally good quality, fine grained with few natural flaws. The range of colours and ubiquitous presence of thin, abraded cortex suggests the exploitation of secondary, derived flint sources, most probably from river terrace gravel deposits. There is no evidence for the use of flint from primary chalk sources. The condition of the assemblage is typical of fieldwalking collections with considerable post- depositional damage; 38% of the assemblage is broken and considerable edge damage had occurred on most pieces, especially on thin feathered edges. This edge damage has

generally prohibited the identification of utilisation and in some cases may also have obscured any retouch applied to removals. The majority of the assemblage is unpatinated (51 pieces, 88%). Patination on the remaining seven flints is generally a blue sheen that only partly obscures the original colour of the flint. Patination appears to occur more frequently on technologically earlier pieces, as seen in the presence of patination on three of the four blades from the assemblage.

The distribution of the worked flint consisted of a low density scatter, 0-4 pieces per 10m square (average 0.7 pieces per square) mainly concentrated in the central area of fieldwalking with a fall off to the north of the area and to the south east. Two diagnostically later Neolithic pieces (see below) were recovered from the western half of the site whilst Mesolithic/earlier Neolithic blade-based material showed no demonstrable clustering.

Mesolithic/earlier Neolithic

A total of six blade products (true blades and blade-like flakes) were recovered from the site. These thin laminar removals are the result of specialised reduction strategies closely associated with Mesolithic and earlier Neolithic technologies. Striking platforms are thin and bear traces of careful trimming and the use of soft hammer percussion. Aside from these removals, most of which would have been suitable for utilisation, no other artefacts can be assigned to this period.

Later Neolithic/Bronze Age

The majority of the assemblage is composed of flake debitage and occasional tools of later Neolithic/Bronze Age date. The majority of the flakes are small waste products with maximum dimensions under 30mm (Chart 1). All reduction stages are present (Chart 2) and the predominance of partly cortical, secondary flakes probably reflects the use of small nodules of raw material and also suggests that working flint, rather than use, was perhaps the main activity in the area. The flakes show traits of simple and expedient reduction strategies with no concern shown over the form of removals or the maintenance of cores through platform preparation or rejuvenation. The majority of intact striking platforms were plain with evidence for trimming or abrading of the platform edge being confined to the blade products discussed above (Chart 3). The relatively high number of both cortical and complex platforms (attesting to the use of multiplatform cores), indicates a lack of concern with or control over the reduction sequence, traits most readily associated with Bronze Age technologies.

Four retouched tools were collected from the site. Three were scrapers: two were somewhat irregular end-scrapers, broadly dateable to the later Neolithic or Early Bronze Age; the third (grid square C10) was of sub-circular form and had been struck from a specialised core with a carefully facetted platform. Both the form and technological traits of this piece have strong later Neolithic associations and in eastern England are invariably associated with Grooved Ware ceramics (Cleal 1984: 152, fig 9.9). The final retouched form was a finely retouched chisel arrowhead, again of later Neolithic date.

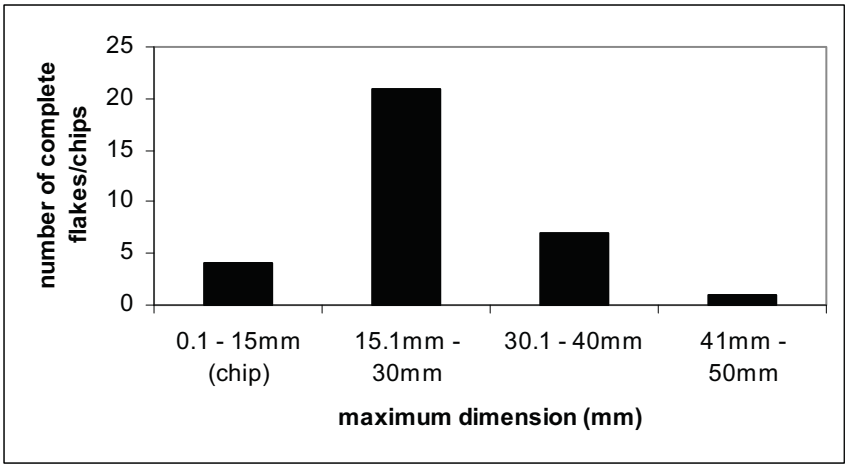

Chart 1: Size classes of complete removals from Site 1

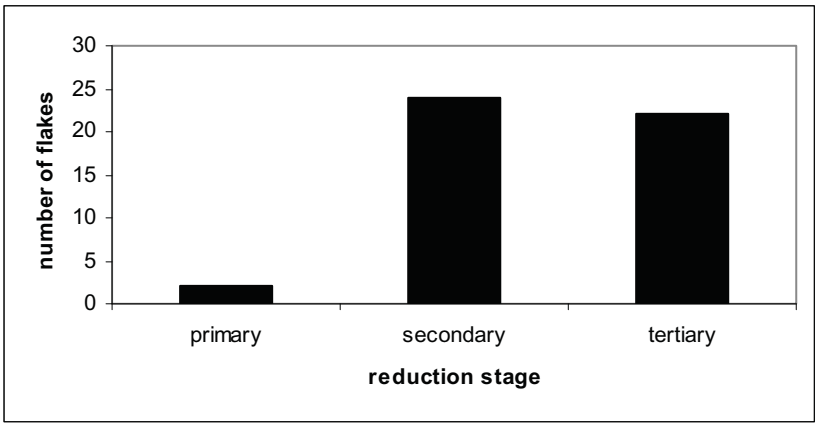

Chart 2: Reduction stages of flakes from Site 1

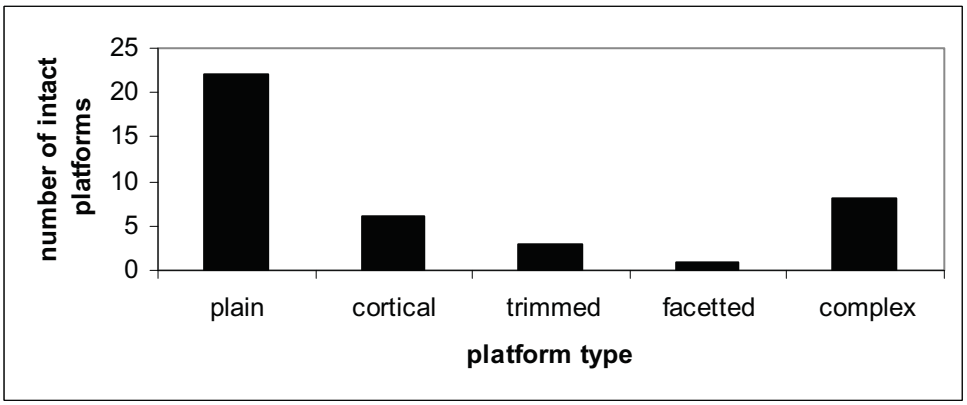

Chart 3: Categories of intact striking platforms on unretouched flakes and blades from Site 1

The flint assemblage from Site 1 represents a chronological sequence of activity, probably from the Mesolithic through to the Bronze Age. Mesolithic/earlier Neolithic activity is attested by the occasional occurrence of blade products across the site with no discernable clustering or patterning. This material is superseded by later material including two pieces strongly suggestive of later Neolithic activity from the western part of the site. Some of the flake-based material recovered from the site may relate to this phase, but the technological traits of the material suggest that at least some of this material relates to later, Bronze Age, flint working.

Pottery (Katie Anderson with David Hall)

The pottery assemblage from Site 1 comprised a total of 62 sherds weighing 411g. There were seven Roman sherds, including grey wares, Samian and Nene Valley colour-coated fabrics. Much of the material was non-diagnostic and thus could only broadly dated as Roman. Sherds which could be more specifically dated ranged from 2nd-4th century AD. There was no pattern in the distribution of this material (see Fig 25).

Nine hand-made Saxon sherds were recovered, which included three simple everted type rims. Fabrics were gritty with igneous rock fragments and mica particles. A few were predominantly sandy. There were no thick or decorated sherds, possibly indicating a Middle Saxon date (650-900), but an early Saxon date is also possible. There were no Ipswich Wares present, which suggest at least a Middle Saxon date, but the collection is very small and Brampton is near the limit of Ipswich Ware distribution. The number of sherds is consistent with there being a 'site', in view of the limited use of ceramics during the period, with the eastern edge of the site seeing a slight clustering close to an in-filled quarry visible as a surface depression (see Fig 26).

The 12 Medieval sherds recovered comprised three dating to the 14th century and nine from the 15th century. Fabrics were generally undiagnostic, but there was one sherd each of possible Lyveden and Grimston material. One 15th century sherd had a typical flanged rim. The sherds were almost certainly deposited with manure. The number is more than would normally be expected, but perhaps the sandy gravels needed humus, and the site is not far from Brampton village. The distribution of sherds was not uniform over the whole area, but there was no significant concentration and no grid had more than one medieval sherd (see Fig 27).

Post-Medieval pottery comprised three 16th century sherds, 22 17th century sherds, four sherds dating to the 18th century and five 19th century sherds, totalling 34. Most were Glazed Red Earthenwares, but there were also white wares, an iron glaze and an English stoneware sherd. All are likely to have been deposited with agricultural manure (see Fig 28).

Metalwork (Grahame Appleby and Andrew Hall; Fig 29)

Copper Alloy

<1108> MD 122: Copper alloy rose farthing of Charles I 1625-49 AD. Measuring 15mm in diameter, weight 2g. Poor condition. 17th century.

<1109> MD 143: Fragment of finely manufactured cast mount, possibly from a casket or piece of furniture. The mount takes the form of two sub-circular frames and a central bar splayed at one end. The reverse side is unfinished suggesting this was made for attachment. Measuring 22mm x 20mm by 1mm in thickness. Possibly late Medieval in date.

<1110> MD 144: Small fragment of a cast crotal bell. Cast bells were worn around the necks of farm animals. The colour suggests it is cast in a high tin content alloy such as a gun metal. Measuring 18mm x 12mm and weighing 5g. Such bells date from the 16th and 17th centuries.

<1111> MD 148: A crudely made plain circular button with the pin / shank bent over to form the loop on the reverse. Undecorated and measuring 15mm in diameter. Probably dating from the 17th-18th century.

<1112> MD 152: A cast copper alloy foot from a large cooking vessel such as a tripod skillet. Measuring 35mm x 30mm and weighing 65g. Late Medieval in date. Similar examples are published from Norwich (Margeson 1993: 92).

<1113> MD 155: A cast copper alloy double oval buckle (often referred to as a spectacle buckle). The frame shows heavy use-wear yet remains intact and complete. Measuring 29mm x 23mm and weighing 15g. This form of buckle is commonly encountered and there are published examples from excavations at Colchester, Norwich, Winchester, London and York. These examples date from the 14th to 16th centuries.

<1114> MD 156: A machine manufactured cap or cover of 19th or 20th century date, and most likely originating from a piece of agricultural machinery. Measuring 30mm in diameter by 6mm in height. Weight 45g.

<1115> MD 162: A cast copper alloy mount is the form of a flower head or sunburst, with twelve lobes or petals. The reverse has a pair of integral tapering shanks bent over towards each other. Parallels from London suggest this may have been a decorative mount for a leather strap (Egan and Pritchard 2002: 243). An alternate interpretation is provided by another published find from London. This suggests such mounts were attached in numbers to armour plates, presumably as decoration (Egan 2005: 197). The mount measures 20mm in diameter and weighs 8g. Late Medieval in date.

<1116> MD 166: A copper halfpenny of William and Mary 1688-94, with twin portraits on the obverse and Britannia to the reverse. 28mm in diameter and 14g in weight.

<1117> MD 172: A copper alloy shotgun percussion cap and plate. 20th century.

<1118> MD 174: A small fragment of copper alloy sheet of irregular shape measuring 22mm x 18mm. Weight 4g. Undated.

<1119> MD 175: A cast copper alloy buckle pin of large size. Measuring 49mm in length, the pin is ridged towards the loop, with a cross hatched grip and wear on the tip from the buckle frame. Close parallels are published from London (Egan and Pritchard 2002: 115). 14th century in date.

<1120> MD 176: A machine made 19th or 20th century copper alloy strip 32mm in length.

<1121> MD 178: A sheet copper alloy thimble with impressed decoration. This thimble has been struck by the plough and severely damaged. 17th century in date.

<1122> MD 179: A small copper alloy strap-end with rounded terminal (tongue-shaped), with two rivets. This appears to have been cast in one piece rather than folded sheet metal. This would have originally been attached to the end of a thin leather strap. Measuring 19mm x 13mm and weighing 10g. Late Medieval in date.

<1123> MD 181: A plain round copper alloy button of large size (22mm diameter), with intact loop. Dating to the 18th or 19th century.

<1124> MD 183: A distorted fragment of copper alloy sheet pierced with two circular holes. 35mm x 28mm. Undated.

<1125> MD 185: A small square coin or apothecaries' weight measuring 10mm x 10mm x 2mm. The upper surface is impressed with a crown with the letters C and S on either side and VII below. The opposing side is impressed with a bearded and crowned portrait looking left with the letters BR. The portrait may well be that of James I (1603-25) or Charles I (1625-49). The regal association suggests this is an official weight, most likely for gold coinage. It weighs 2.5g

Lead

<1181> MD 160: A fragment of trimmed window lead, 27mm in length. Post-Medieval.

<1185> MD 167: A crudely formed line or net weight of the standard rolled oval, tubular form, 38mm in length. Similar weights from London suggest a late Medieval or early post-Medieval date (Egan 2005). Weight 40g

<1191> MD. 182: A conical shaped lead line or net weight pierced from top to bottom. Measuring 28mm in height with a base diameter of 13mm. It weighs 26g. Post-Medieval.

<1192> MD 184: A damaged lead grain sack seal 22mm in diameter. 18th or 19th century in date.

In addition to the above, 10 fragments of undiagnostic and undated lead sheet or casting waste were retrieved. This group consists of the following catalogue and MD numbers: 146 <1179>, 158 <1180>, 161 <1182>, 163 <1183>, 165 <1184>, 168 <1186>, 170 <1187>, 173 <1188>, 177 <1189>, 180 <1190>.

Iron

A large quantity of small iron nails were recovered from the first two transects on this site. This resulted from turning off all ferrous discrimination on the metal detectors to assess the density of iron finds within the topsoil. The sheer quantity recovered led to a reinstatement of the lowest discrimination levels for the remaining transects. This restricted the recovery form this point onward to Medium-larger nails / artefacts. The following is a summary of the ferrous material recovered:

Small nails (<40mm in length): 100 <1127>, 102 <1128>, 103 <1129>, 104 <1130>, 105 <1131>, 106 <1132>, 108 <1134>, 110 <1136>, 111 <1137>, 112 <1138>, 113 <1139>, 114 <1140>, 115 <1141>,

116 <1142>, 118 <1144>, 119 <1145>, 121 <1147>, 123 <1148>, 124 <1149>, 125 <1150>, 126 <1151>, 127 <1152>, 129 <1154>, 130 <1155>, 131 <1156>, 132 <1157, 133 <1158>, 135 <1160>, 137 <1162>, 138 <1163>, 142 <1166>, 145 <1167>, 147 <1168>, 149 <1169>, 159 <1174>, <1175>.

Large nails (>40mm in length): 151 <1171>, 157 <1173>, 169 <1177>, 171 <1178>.

Horseshoe: 109 <1135>.

Knife blade fragment: 150 <1170>.

Cast iron pipe fragments: 101 <1126>, 107 <1133>, 136 <1161>.

Unidentified: 117 <1143>, 120 <1146>, 128 <1153>, 134 <1159>, 140, 141 <1165>.

Site 2

Site 2 is located to the south of Brampton Village, off the B1415 (TL 201688, see Fig 6 and Figures 30-33). The site is located terrace grrvels, on a flat lying field 'above' the Ouse River Valley. Crop was covering a high percentage of the field (50-75%), measuring *c.* 5cm high, making visibility in these areas fair and poor in places. Areas outside of the crop had good visibility with light plough soil. The weather conditions were good, being overcast. A total of 59 squares were walked, covering an area of 0.59ha. This site was not metal-detected.

Flint (Lawrence Billington)

The fieldwalking of Site 2 produced a small assemblage of 24 worked flints weighing 140.8g together with 6 unworked burnt chunks weighing 63.3g (see Fig 30). The worked assemblage consists entirely of unretouched debitage products probably representing later Neolithic and Bronze Age flint working in the area (Table 4).

The raw material is generally of good quality and consists of fine grained flint of various colours derived exclusively from secondary sources, probably gravel deposits. The small size of the removals and predominance of secondary (partly cortical) flakes suggests the exploitation of small nodules of flint. The condition of the assemblage is typical of fieldwalking collections with considerable post-depositional damage; 29% of the assemblage is broken and considerable edge damage had occurred on most pieces, especially on thin feathered edges. This edge damage has generally prohibited the identification of utilisation and in some cases may also have obscured any retouch applied to removals. All of the worked flint is unpatinated, perhaps reinforcing suggestions that the majority of the material relates to later prehistoric activity.

The distribution of the material reveals low densities of worked flint, with values between zero and three per 10m square (average 0.4 pieces per square). Possible concentrations occur at two points on the extremities of the walked area, one to the north-east in squares N8-9 and O8-9, the other to the south-west around squares O3-4 and P3-4. The unworked burnt flint seems to show a distinct concentration in the northern most corner of the site centring on square K9, this appears unrelated to the distribution of worked flint.

Grid Square	Chip	chunk	flake	blade like flake	flake core	**total worked flint**	unworked burnt chunk
K9							3
L6					1	**1**	
L8			1			**1**	1
L9							1
M5			1			**1**	
N3			1			**1**	
N7			1			**1**	
N8			2			**2**	
N9			1			**1**	
O3		1				**1**	
O4			1			**1**	
O6			1			**1**	
O8	2		1			**3**	
O9				1		**1**	
P3		1				**1**	
P4	1		1			**2**	
P6				1		**1**	
Q4			1			**1**	
Q8	1					**1**	
Q9			1			**1**	
Q10			1			**1**	
R6				1		**1**	
T8							1
Totals	**4**	**2**	**14**	**3**	**1**	**24**	**6**

Table 4: Flint from Site 2

The technological characteristics of the material are suggestive of a later prehistoric date for the bulk of the assemblage. The flakes are of varied morphology; some appear to have been struck from multiplatform cores and little attempt has been made to control the morphology of the removals. Plain striking platforms predominate alongside a high number of cortical platforms. There was no evidence for platform preparation on any of the removals and hard hammers appear to have used exclusively. The high number of cortical platforms is unusual and may relate to the small size of nodules being utilised, as well as the expedient and unsystematic approach to flake production seen in the majority of the assemblage. Three laminar blade like flakes were recovered, whilst superficially similar to true blades they are not the result of dedicated, systematic blade production, representing the opportunistic or fortuitous production of such removals during a flake-based reduction sequence. A single multiplatform core (weighing 29g) was recovered. This had been extensively worked down from multiple platforms until exhausted and although it is difficult to determine the reduction strategy from core in its final stages the flake scars are consistent with the expedient flake removals represented elsewhere in the assemblage.

In the absence of any strictly diagnostic material it is difficult to offer any precise dating for the assemblage other than to say it appears to relate to technologies of the later Neolithic and Bronze Age, and probably represents a palimpsest of low intensity activity throughout this period. There is little evidence for the use of flint tools, subjectively few of the flakes appear suitable for utilisation in unretouched form and no formal tools were recovered. This together with the predominance of partly cortical flakes suggests the material is mostly derived from flint working at the site.

The flint assemblage from Site 2 represents a low density scatter of material broadly dating to the later Neolithic and Bronze Age which reflects expedient and low intensity working of small locally obtainable flint nodules. No evidence for activities beyond the working of flint was recovered nor was material relating to earlier periods of prehistory.

Pottery (Katie Anderson and David Hall)

The pottery assemblage comprised a total of 30 sherds weighing 0.419Kg. Three sherds of Roman pottery, weighing 7g were recovered from Site 2 (see Fig 31). This comprised two greyware sherds, dating 2nd-4th century AD. Both sherds were non-diagnostic, small and abraded.

Two sherds of 15th-century date and one 16th century sherd were also recovered. None of these is likely to represent an archaeological feature, the Medieval sherds deriving from manuring deposits (see Fig 32).

The remaining 25 sherds were of post-Medieval date, mainly Glazed Red Earthenwares of the 18th and 19th centuries. They were almost certainly derived from agricultural manuring and have no relevance to archaeological remains (see Fig 33).

Site 3 East

Site 3 East covered an area of 2.04ha, and was located to the north of the village of Offord Cluny, between St Neots and Godmanchester, falling on the eastern side of the East Coast Main Lline (TL 224682, see Fig 8 and Figs 34-38). The field lies on an underlying boulder clay bedrock, with overlying river terrace deposits. Crop covered a high percentage of the field (up to c.80%), particularly the eastern side, making visibility fair to poor in some areas. The crop became lighter to the west of the site (around Row M), where visibility was better. The weather on the days the fields were walked was cloudy with sunny spells, the latter reducing visibility. A total of 204 squares were walked in this field in addition to 96 transects which were metal detected.

Flint (Lawrence Billington)

Fieldwalking at Site 3 East recovered 80 worked, unburnt flints weighing 482.4g. No unworked burnt flint was collected. The assemblage is dominated by material suggestive of later prehistoric activity from the later Neolithic into the Bronze Age.

The flint was varied in quality and character. Most was free of flaws and of fine grained texture; however a significant proportion was made up of coarser grained material of poorer quality. Surviving cortex is thin and abraded, suggesting derived, secondary sources for the material. A small number of pieces lacking cortex are made on good quality dark grey to black flint that could possibly derive from primary flint deposits on the chalk. Most pieces display edge damage typical of such surface collections and 35% of the assemblage was broken. The majority of the assemblage is unpatinated (65 pieces, 81%). Where it does occur patination is generally a blue sheen that only partly obscures the original colour of the flint.

The distribution of the flint showed greatest densities in the south-western area of fieldwalking (see Fig 34). Low densities were encountered throughout, producing between zero and four pieces of flint (average 0.4 flints) per 10m square.

Grid square	chip	chunk	flake	blade like flake	blade	bladelet	barbed and tanged arrowhead	discoidal core	keeled core	**total of worked flint**
C12			1							1
C13			1							1
C14			4							4

Grid square	chip	chunk	flake	blade like flake	blade	bladelet	barbed and tanged arrowhead	discoidal core	keeled core	**total of worked flint**
C15			1							1
D11		1	1		1					3
D12			1			1				2
D13				1				1		2
D14			1							1
D15	1		2							3
D16	1		2						1	4
D17			3							3
D18	1		2							3
E12			1					1		2
E13			2							2
E14			2							2
E17			3							3
E22			3							3
F11			2							2
F13			2							2
F18			1							1
F19			1							1
G11			1							1
G14			2							2
G16			2							2
H15			1							1
H16			1							1
I12						1				1
I13			1							1
I15			1							1
I17			3							3
I18			1							1
I21		1	2		1					4
I22			2							2
J12							1			1
J16			1							1
J21			1							1
K15		1								1
T12			1							1
Y13			1							1
Z2			1							1
Z8			1							1
Z14			1							1
AA11				1						1
AA12	1									1
AC13			1							1
AA6			2							2
Totals	**4**	**3**	**63**	**2**	**2**	**2**	**1**	**2**	**1**	**80**

Table 5: Flint from Site 3 East

The majority of the assemblage appears to represent flake-based debitage of later prehistoric date. Only six blade-based products (7.5% of the entire assemblage) were recovered. These pieces demonstrate Mesolithic or earlier Neolithic activity on the site but in the absence of retouched forms or a larger sample it is impossible to characterise the date or nature of this activity in any detail. The rest of the assemblage is dominated by small waste flakes of varied morphology. All stages of reduction are represented, with a dominance of secondary flakes. The exclusive use of hard hammers and a lack of platform preparation indicate an expedient approach to core reduction characteristic of later Neolithic and Bronze Age flint working.

A small number of debitage products indicate more specialised flint working, probably dating to the later Neolithic. Two discoidal cores were recovered from the site, very close to each other in grid squares D13 and E12. Both were of good quality dark flint and had been thoroughly worked down. Traces of platform preparation in the form of careful faceting was visible on both pieces and it is clear that they had produced 'levalloisoid' removals (Saville 1981: 6-7); thin relatively broad flakes ideally suited to use as cutting flakes or as blanks for retouched forms. Two flakes bore traces of having been struck from such cores, from grid squares E22 and H16. This form of specialised core reduction appears in later Neolithic contexts alongside more expedient flake production, (Saville: 1981, Healy 1985), and may reflect a degree of specialisation in the manufacture of specific tools (Durden 1996).

The only retouched form recovered from the site was a large, complete barbed and tanged arrowhead of Early Bronze Age date. The lack of retouched tools reinforces the impression that much of the flint from the site is the result of flint working rather than more domestic activity. The complete absence of burnt flint, generally a strong indicator of domestic activity, also indicates activity may have been task-based and episodic in nature.

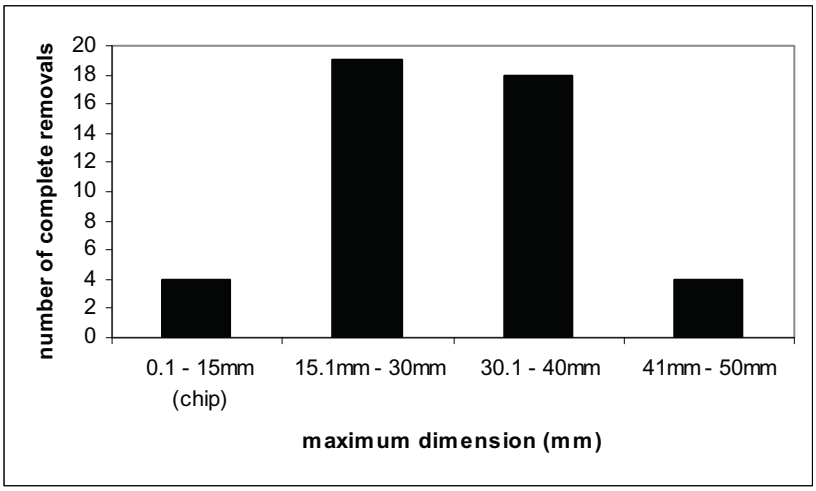

Chart 4: Size classes of complete removals from Site 3 East

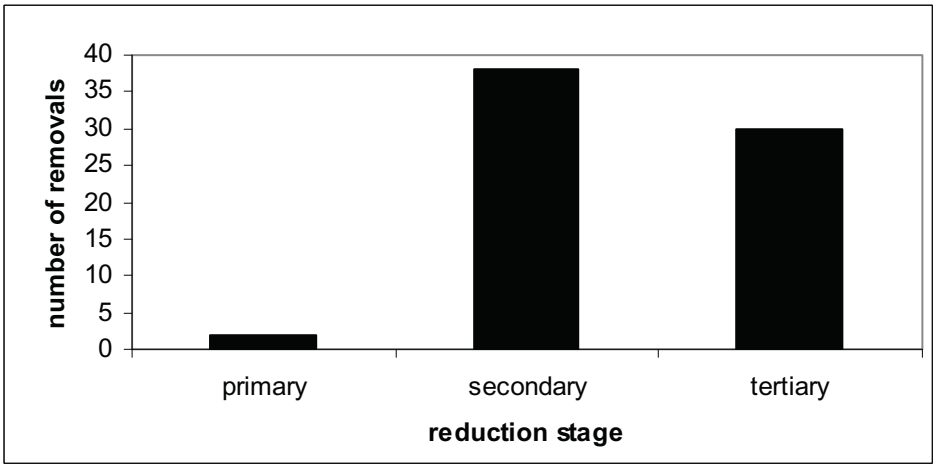

Chart 5: Reduction stages of removals from Site 3 East

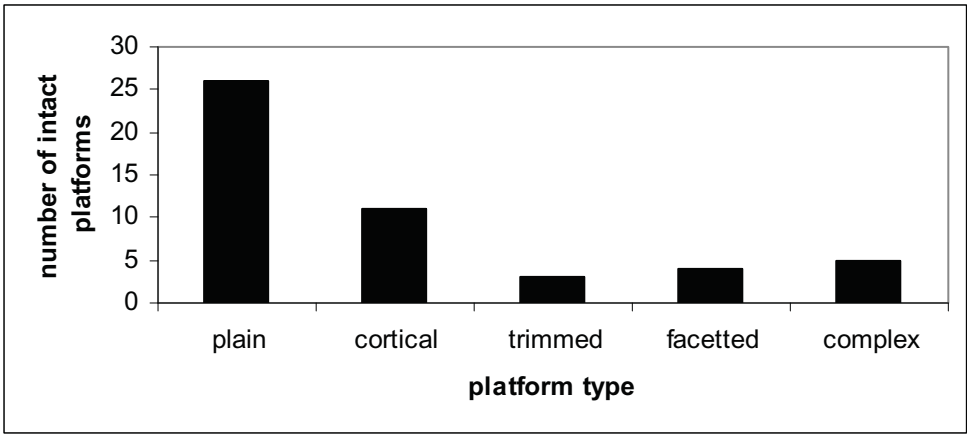

Chart 6: Categories of intact striking platforms from Site 3 East

In summary, the flint assemblage from Site 3 East provides evidence for low density prehistoric activity from the Mesolithic/early Neolithic until at least the Early Bronze Age. Retouched forms are very rare, suggesting that this activity was largely related to flint working and other non-domestic tasks. The presence of several pieces strongly diagnostic of specialised later Neolithic flint working is noteworthy; suggesting that the production of carefully made tool blanks was taking place in this area.

Pottery (Katie Anderson with David Hall)

The collection contained a total of 161 sherds weighing 810g. The Roman material comprised a small assemblage totalling 24 sherds weighing 156g, and was collected from 19 squares in Field 3 East (see Fig 35). All of the material was analysed and details of fabric, form, and date were recorded. The low mean weight of 6.5g and the abraded condition of the sherds is not unexpected from a fieldwalking assemblage; however, this made the identification of specific vessel forms problematic, which therefore made it difficult to precisely date many of the sherds.

Square	Fabric	No.	Wt(g)	Form	Date
AA12	Mica GW	1	3	Body	2nd-4th AD
AA7	WW NV	1	6	Mortaria	2nd-4th AD
AA6	Mica GW	1	6	Body	2nd-4th AD
AB2	CS GW	1	3	Body	2nd-3rd AD
AB3	CS GW	1	13	Body	2nd-4th AD
AB3	CS GW	1	3	Body	2nd-4th AD
AB6	CS GW	1	1	Body	RB
AB6	WW	1	10	Dish/bowl	2nd-4th AD
AC13	CS GW	1	1	Body	RB
G16	CS GW	1	2	Body	RB
J14	NVCC	1	6	D1.2	4th AD
K12	CS GW	2	21	Body	2nd-4th AD
K12	CS GW	1	9	Beaded bowl	2nd-3rd AD
K14	CS GW	1	1	Body	RB
K22	CS GW	1	2	Body	RB
L13	CS GW	1	2	Body	RB
Q12	Horn GW	1	14	Body	2nd-4th AD
Q12	CS GW	1	7	Body	RB
V12	CS GW	1	3	Body	2nd-4th AD
X13	CS GW	1	2	Body	2nd-4th AD
Z1	CS GW	1	34	Flat base	RB?
Z11	NVCC	1	1	Body	Mid 2nd-4th AD
Z2	CS GW	1	6	Body	2nd-4th AD

Table 6: Roman pottery from Site 3 East by square

The majority of the sherds were sandy greywares (19 sherds weighing 119g), of uncertain origin, although there was one Horningsea greyware sherd from square Q12. The exceptions to this were two Nene Valley colour-coated sherds, one Nene Valley whiteware and one other whiteware. Very few vessel forms were identified, comprising of one beaded bowl, one convex dish, one dish/bowl, one mortaria body sherd, and a flat base sherd. Due to the condition of the assemblage, much of the material could only be given a broad Roman date. However, fabrics and forms that were identifiable, suggest a later Roman date of 3rd-4th century AD.

There was no obvious clustering of material across the field, although the eastern side did contain more material. The distribution of Roman pottery suggests that in the eastern half of the field, the material was extending southwards, with an apparent peak of material towards the south east. This ties in with the geophysical survey evidence, which shows a fairly dense settlement, including several linear enclosures and a possible trackway/roadway, which appear to be running southeast across the site (Pre-Construct Geophysics 2008). The pottery from the fieldwalking therefore supports this evidence.

It should be considered that the presence of the railway line has affected the results, since much of the ground immediately to the east of the line (the western edge of the site), is likely to have been disturbed during the construction of the railway line. Interestingly, the flint distribution contradicts this as it was mostly collected from the western side of Site 3 East (see above and Fig 35).

A total of 26 Medieval sherds were recovered (see Fig 36), which comprised 10 sherds of the 14th century, and 16 dated to the 15th century. Fabrics were mostly undiagnostic, some sandy, but among them were two possible Lyveden wares.

Post-medieval sherds included 13 pieces of 16th century date weighing 135g. Most were plain redwares and Glazed Red Earthenwares, but there were also iron glazes and English stonewares, *etc*. All the sherds are likely to have been deposited with agricultural manure (see Fig 37).

Roman Tile (Katie Anderson)

A small assemblage of tile totalling 16 pieces and weighing 544g were recovered from Site 3 East. The assemblage was analysed and details of form and fabric were recorded. The results are shown below in Table 7.

Square	No.	Wt(g)	Form
G15	1	129	?Imbrex
N12	1	69	Floor tile
P13	1	57	Unknown
Q13	1	41	Tegula?
Y12	1	7	Unknown
Z1	1	139	Imbrex
Z4	4	72	Unknown
Z6	6	30	Unknown
TOTAL	16	544	x

Table 7: Roman tile from Site 3 East by square

Four tile forms were identified, comprising two imbrex, one tegula and one floor tile. The remaining pieces were non-diagnostic, which is not unexpected from a fieldwalking assemblage. Given the small quantity of material recovered, little can be said in terms of distribution; however, the tile follows a similar pattern of distribution as the Roman pottery, with most coming from the south-eastern half of the site.

The size and condition of the material allows for little discussion on any potential structures; however, the presence of roof and a floor tile suggests a building in the vicinity.

Metalwork (Grahame Appleby and Andrew Hall; see Fig 38)

Copper Alloy

<1687> MD 4: Pierced simply decorated rounded casket mount fragment with a flat back made from cast copper alloy, measuring 9mm wide and 13mm long; weight 1g. Possibly Roman period.

<1688> MD 5: Plain flat copper alloy button, complete with unreadable manufacturer's name and attachment loop on the reverse. Diameter 19.5mm, weight 4g. 19th century.

<1689> MD 14: Small copper alloy stud with chequerboard decoration. Diameter 12mm, weight 1g. Late Medieval or early Post-medieval.

<1690> MD 24: Plain small copper alloy button (may have previously been gilded or tinned). Diameter 16.5mm, weight 2g. Second half of the 18th or first half of the 19th century.

<1691> MD 36: Thin very worn copper alloy disc, possibly a coin. Diameter c. 20mm, weight <1g. Undated.

<1692> MD 39: Small fragment of cast copper alloy crotal bell with fish-scale decoration measuring 155m x 19mm, weight 1g. Medieval or early Post-medieval.

<1695> MD 44: Inverted flat 'plate-shaped' plain button. Diameter 21mm, weight 4g. 18th – 19th century.

<1696> MD 46: Early Victorian 'bunhead' farthing with Britannia on the reverse. Diameter 20mm, weight 3g, dated 1866.

<1696> MD 48: Very worn early Victorian half-penny; weight 5g, diameter 22mm. 19th century.

<1699> MD 9: Small Roman n*ummus* with bust of the emperor on the obverse and image of soldiers and military standards on the reverse. Diameter 17mm, weight 1g. Mint mark CONST is legible dating the coin issue to 318–340 AD or after 353 AD; 4th century.

<1710> MD 23: Amorphous triangular-shaped copper alloy fragment, irregular in shape and thickness, measuring *c*. 25mm x 26mm, weight 14g. Undated.

<1712> MD 37: Fragment of thick walled cast copper alloy object, with possibly rim, measuring *c* 22mm wide and 6mm in thickness, weight 14g. Undated, although possibly Roman period due to pale green patina, or earlier.

<1714> MD 47: Triangular copper alloy vessel fragment with surviving rim. Tapering thickness from 6.5mm to 4mm at rim. 40mm x 35mm, weight 21g; probably from a late Medieval or early Post-medieval skillet.

Lead

<1683> MD 16: Small, piece of angled very degraded lead, with appearance, 2mm thick and measuring *c*. 8mm x 8mm; weight 1g. Undated.

<1685> MD 12: Small lead casting spill *c*. 14mm long and 3mm thick, weight 1g. Undated.

<1693> MD 42: Fragment of a hollow-cast lead toy soldier missing its head; weight 1g. 19th to mid 20th century.

<1709> MD 21: Spheriodal large-gauge lead-shot. Diameter *c*. 9.5mm, weight 3g.

<1711> MD 25: Large piece of clipped and folded lead sheet. Length 35mm, width 28mm, total thickness 5mm, weight 32g. Undated; most probably Post-medieval.

<1713> MD 45: Small bun-shaped pierced lead weight, with flat surfaces and rounded edge. The weight has plough damage to one side, creating a false flange. Diameter 22mm, thickness 12mm, weight 33g.

Iron Metalwork

<1581> 014: Heavy cylindrical object 23.5mm long and weighing 15g. The object is very corroded, but has traces of horizontal bands; possibly a spring fragment. Modern.

<1654> AB3: Heavily corroded nail, spike or bar *c*. 23mm long and weighing 14g. Undated.

<1680> MD 28: Two nail fragments, hand-forged with square/rectangular cross-sections. The larger fragment is a section of the shank, missing both head and point. Length 40mm, weight 3g. The smaller fragment preserves a slightly bent over head and *c*. 20mm of the shank; weight 4g. Undated.

<1697> MD 3: Corroded wide tapering fragment with slight curvature and rounded terminal 55m long, 36mm wide, weight 27g. Having a triangular appearance this fragment is most likely from an agricultural implement, for example a coulter. Undated.

<1698> MD 7: Fragment from a relatively straight sided bar or strip 64mm long, 22mm wide and tapering in thickness from *c.* 8mm to 6mm, weight 30g. Possible tine from a harrow or similar. Post-Medieval.

<1701> MD 91: Broken edge of a tool or implement such as a hoe, axe or mattock where the blade was *c*. 65mm wide; weight 21g. Undated; although the lack of corrosion suggests a relatively more recent date for manufacture.

<1701> MD22: Rectangular shaped fragment of a 9mm thick bar or strip *c*. 18-20mm square, weight 6g. Undated.

<1702> MD 27: Corroded and bent tapering rectangular cross-sectioned bar, 52mm long, 12mm wide and 3mm think, weight 7g. Undated.

<1703> MD 29: Small, slightly tapering rectangular cross-sectioned bar, 32mm long, 11m wide and 5mm thick, weight 6g. Undated.

<1704> MD 30: Small, corroded bent nail shank or bar with square cross-section. Length 33mm, width 3.5mm, weight 1g. Undated.

<1705> MD 31: Corroded rectangular cross-section bar or nail shank. Length 32mm, width 7mm, weight 3g. Undated.

<1706> MD 34: Very small fragment of an iron pin or nail. Length 12mm, weight <1g. Undated.

<1708> MD 35: L-shaped bar or staple with rounded to square cross-section, length 32mm, weight 7g. Relatively light and corroded, this suggests considerable mineral loss. Undated.

<1708> MD 43: Triangular fragment with one curved edge. 32mm x 36mm and 4-6mm thick; weight 22g. Probably from an agricultural implement, such as a plough blade. Undated, but due to lack of corrosion, probably modern.

Site 3 West

Site 3 West was located to the west of the East Coast Main Line and covered a total area of 2.88ha, equating to a total of 282 walked squares (TL 220683, see Fig 8 and Figs 34-38). 116 transects were metal detected. The field conditions were very good, with little crop coverage and well ploughed soil. The exception to this was a strip in the middle of the site which appeared to have some sort of alluvium deposit, which appears to have somewhat 'masked' surface finds. The weather conditions ranged from moderate to good, with a mixture of sunny and cloudy weather. Several squares within this field were excluded due to the presence of bird nests.

Flint (Lawrence Billington)

The fieldwalking at Site 3 west recovered 364 worked flints (1879.5g) together with 10 unworked burnt chunks (147.8g, see Fig 34). The assemblage reflects a palimpsest of prehistoric activity with a substantial Mesolithic and earlier Neolithic component accompanied by flint work from the later Neolithic and Bronze Age.

The flint varied in quality and character. All appeared to derive from secondary sources. Most was of high quality, fine grained and with few natural flaws. A smaller component of the assemblage had slightly different characteristics, being either coarser grained or having incipient flaws caused by natural thermal fractures or fossil inclusions. This poorer raw material was invariably associated with technologically later pieces, probably of Bronze Age date and reflects a general decline in the care given to raw material selection later in prehistory (Ford *et al*). In common with most assemblages collected from surface deposit most pieces exhibited edge damage of varying severity whilst 37% of the assemblage was broken. Patination occurred on 30% of the assemblage and appears to have an (imprecise) chronological significance; of blade-based products, broadly dateable to the Mesolithic or earlier Neolithic (58% was patinated). Four of the worked flints had also been burnt, one flake and three blade cores. The high number of burnt blade cores resonates with evidence from several lithic assemblages from the fenland where it has been suggested that these pieces were collected for heating in this period, selected by virtue of their relatively substantial size (Gdaniec *et al* 2007: 86, Edmonds *et al* 1999). The distribution of flint showed little significant patterning. Most obvious was the lack of material on the extensive band of alluvium that stretched across the site on a north-south alignment. The spatial patterning does not appear to have any chronological significance, with earlier blade-based and later flake dominated technologies both distributed fairly evenly over the area. The number of flints collected varied from zero to nine pieces per 10m square giving an average of 1.3 pieces per square walked or 2.2 pieces per square from which flint was recovered.

Grid square	chip	chunk	flake	blade like flake	Blade	bladelet	scraper	retouched flake	flake knife	microlith	core rejuvenation flakes	discoidal core	flake core	blade core	core fragment	**total of worked flint**	**unworked burnt chunk**
B4			2		1											3	
B5			2													2	
B6			2													2	
B8		1														1	
B10				1	1											2	
B11			1													1	
B12				1												1	
B13			1													1	
C3	1															1	

Grid square	chip	chunk	flake	blade like flake	Blade	bladelet	scraper	retouched flake	flake knife	microlith	core rejuvenation flakes	discoidal core	flake core	blade core	core fragment	**total of worked flint**	**unworked burnt chunk**
C4	1		1													2	
C5					1											1	1
C6			1			1	1									3	
C7			4													4	
C8			1									1				2	1
C10			2		1											3	
C11			1													1	
C12			1								1					2	
C13			1													1	
C14																	1
D2				1	1									1		3	
D3			1													1	
D4			3	2												5	
D5			1				1									2	
D6	1		5													6	
D7			2		1											3	
D8				1												1	
D9			4			1										5	
D10			1											1		2	
D11	1		2			1										4	
D12				1										1		2	
D14			1													1	
E3		1	1	2									1			5	
E4			1													1	
E5			2													2	
E6	1		1													2	
E7			4													4	
E8			4										1			5	
E9			5		1											6	
E10			2													2	
E11			3		2											5	
E12			2											1		3	
F2			1				1									2	
F3			3		1											4	
F4			1	1												2	
F5			1													1	
F6			1													1	
F7	1		1													2	
F8			2													2	
F9			2													2	
F10			1													1	
F11	1															1	
F12	1															1	
G3									1							1	

Grid square	chip	chunk	flake	blade like flake	Blade	bladelet	scraper	retouched flake	flake knife	microlith	core rejuvenation flakes	discoidal core	flake core	blade core	core fragment	**total of worked flint**	**unworked burnt chunk**
G5					1		1									2	
G6						1										1	
G7			1													1	
G9			2													2	
G10																	1
H2			3													3	
H3	1		1													2	
H4			1													1	
H5				2												2	
H6			2													2	
H14			1												1	2	
I2			2		3											5	
I3			3							1				1		5	
I4	1															1	
I5		1	4											1		6	
I6			3										1			4	
I7			1	1			1						1			4	
I8	1		4		1											6	
I9	1		2			1										4	
I10			3													3	
I11	1				1											2	
I13			2													2	
I14			1													1	
I15			3													3	
I17	1															1	
I19			2													2	
I20			1													1	
I21			1													1	
J2			1										1			2	1
J3			3	1												4	
J4			1													1	
J5			1													1	
J6		1	1		1											3	
J7			2													2	
J8			4													4	
J9			1	1		1										3	
J10			2	1										1		4	
J11			1													1	
J12	1		2													3	
J13			3													3	
J14			1													1	
J15			1													1	
J17	1	1														2	
J18			3													3	

Grid square	chip	chunk	flake	blade like flake	Blade	bladelet	scraper	retouched flake	flake knife	microlith	core rejuvenation flakes	discoidal core	flake core	blade core	core fragment	**total of worked flint**	**unworked burnt chunk**
J19	1			1												2	
J20							1									1	
J21			1													1	
K2			1													1	1
K3			1													1	
K4			1		1											2	
K5			2													2	
K6			1													1	
K7			1		1	1	1									4	
K8			2		1											3	
K9			2													2	
K10			4										1			5	
K11			3													3	
K13			1													1	
K14	1		3	1												5	
L3			2													2	
L8	1															1	
L10			2													2	
M4			3													3	
M5			2													2	
M6			1	1												2	
M9			1		1											2	1
M10			1													1	
M11				1												1	
M13	1		1													2	1
N9			1													1	
N10		1														1	
N12				1												1	
O3						1										1	
O5			1													1	
O7				1												1	
O8			1													1	
O9			1		1	1										3	
O10			1													1	
O11			1													1	
O14			1													1	
P3			1													1	
P9														1		1	
P11			1		1											2	
P13			1													1	
X7					1											1	
Z4			1													1	
AA9								1								1	
AB5	1		1				1									3	

Grid square	chip	chunk	flake	blade like flake	Blade	bladelet	scraper	retouched flake	flake knife	microlith	core rejuvenation flakes	discoidal core	flake core	blade core	core fragment	total of worked flint	unworked burnt chunk
AB6			1													1	
AB7			1													1	
AB10			1													1	
AB11			2		1											3	
AB12	1															1	
AC4																	1
AC5			1													1	1
AC7				1	1											2	
AC8				1												1	
AC9			2													2	
AC11			1													1	
AC12						1										1	
AD4	1		2													3	
AD5			2										1			3	
AD6	1		1													2	
AD7			4					1					1			6	
AD8	2															2	
AD10	2		2		1											5	
AD11			7		2											9	
AD12	2		2								1					5	
AE8	1				1											2	
AE9			1													1	
AE10			2													2	
AE12			2													2	
AF11		1														1	
Totals	**31**	**7**	**230**	**24**	**30**	**10**	**8**	**2**	**1**	**1**	**2**	**1**	**8**	**8**	**1**	**364**	**10**

Table 8: Flint from Site 3 West

Mesolithic and Earlier Neolithic

A substantial Mesolithic/earlier Neolithic presence in the assemblage is demonstrated by large numbers of blade products, totalling 20% of the entire assemblage. These blade-based products take the form of thin, generally parallel sided pieces, invariably having carefully trimmed or abraded platforms and showing evidence for the use of soft hammers. Many of these pieces would have been suitable for utilisation in an unretouched state. The relatively large number of bladelets (defined here as blades with a width less than 10mm) suggests a Mesolithic date for some of the activity, although the general variety in morphology and raw materials suggests that the material is the result of numerous episodes of activity across at least the later Mesolithic and earlier Neolithic. Eight blade cores were also recovered together with two core rejuvenation flakes resulting from specialised blade-based core reduction. The cores are dominated by single platform examples but also include two carefully worked opposed platform cores.

Few retouched tools can be attributed to this phase with any certainty. A small obliquely blunted microlith of Jacobi's type 1a (Jacobi 1978) from grid square I3 is certainly of Mesolithic date, its size perhaps suggesting a date towards the latter half of the Mesolithic. A delicate end-scraper on a blade blank from grid square D5 is probably of Mesolithic or earlier Neolithic date and whilst some of the other scrapers may belong to this phase their forms are more consistent with later technologies.

Later Neolithic and Bronze Age

The remainder of the assemblage is dominated by evidence for later Neolithic and Bronze Age flint working. The majority of flakes are small hard hammer struck waste products and show a general lack of concern either with core maintenance or with the morphology of removals, hallmarks of the flake-based industries of later prehistory. The eight flake cores recovered from the assemblage bear out the traits seen in the flake assemblage, all are irregular or with more than one platform and show little anticipation of, or care over, the reduction sequence. Some more careful, specialised flake production of later Neolithic date can be suggested by the recovery of a carefully worked discoidal core similar to the two examples recovered from Site 3 East (see above).

Seven scrapers (excluding the earlier example discussed above) were recovered which probably relate to later Neolithic or Early Bronze Age technologies, as does the flake knife from grid square G3. Retouched tools account for 3% of the assemblage, suggesting a substantial amount of 'domestic' activity was taking place at the site alongside more specialised tasks such as flint working.

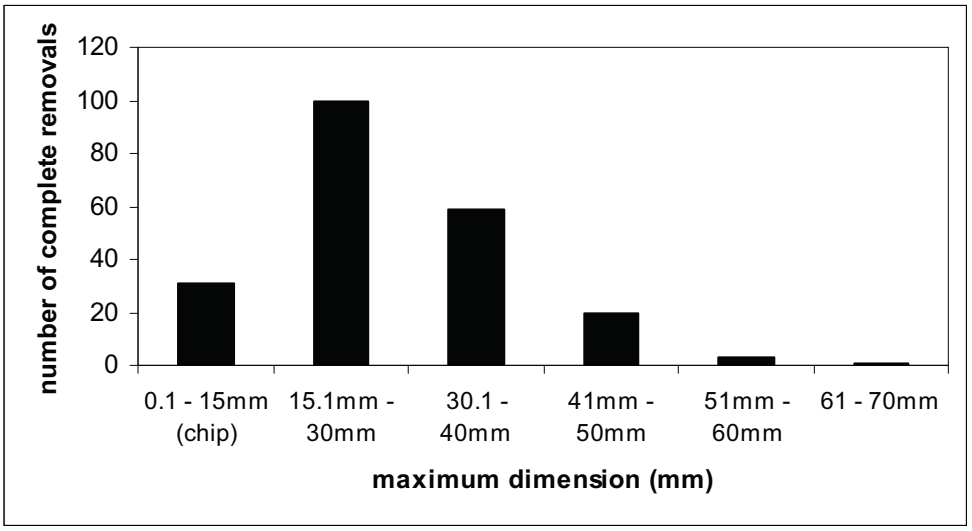

Chart 7: Size classes of complete removals from Site 3 West

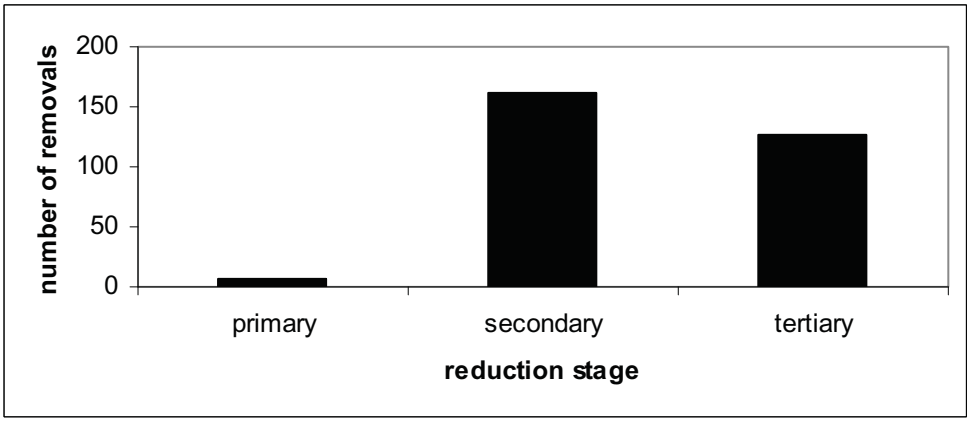

Chart 8: Reduction stages of removals from Site 3 West

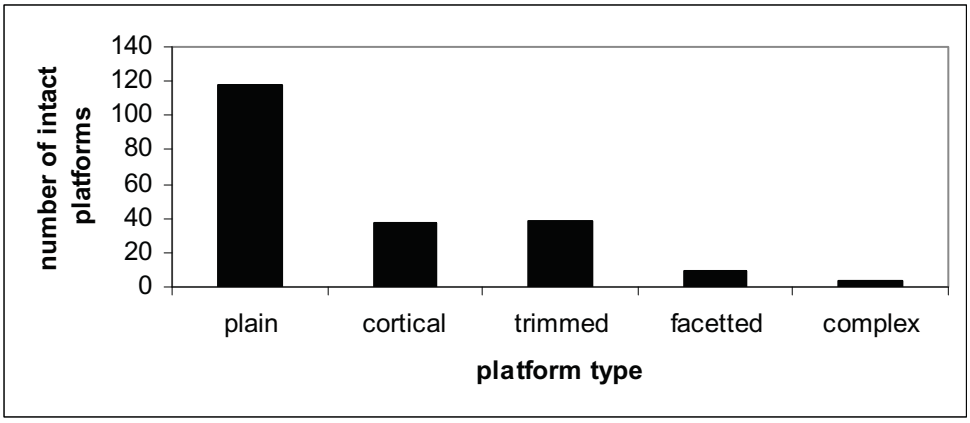

Chart 9: Categories of intact striking platforms from Site 3 West

The flint assemblage form Site 3 West clearly represents activity from the Mesolithic through to at least the Early Bronze Age. A substantial earlier presence in the form of blade-based material suggests a focus of Mesolithic and earlier Neolithic activity in the area. The Later Neolithic and Early Bronze Age is represented by flint working waste and by retouched tools, suggestive of a domestic element to the assemblage.

Pottery (Katie Anderson and David Hall)

The assemblage contained a total of 49 abraded sherds weighing 434g. Four Roman sherds were recovered from Site 3 West, all of which were generic sandy greywares which could only be broadly dated to the Roman period. All of the sherds were small and abraded, showing no pattern of distribution (see Fig 35).

Medieval sherds (27) predominated, of which 17 dated from the 14th century, nine from the 15th century with a single sherd of the 16th century. Fabrics included Lyveden type, one possible Grimston, Hertfordshire fineware, and other sandy wares. The sherds were fairly uniformly scattered over the site and are unlikely to represent an archaeological feature (see Fig 36)

The low proportion of Post-medieval sherds is interpreted as showing that the ridge and furrow formerly existing in the field had probably turned over to pasture (called leys) during the 16th century and remained unploughed pasture in the early modern period and until recently. Hence there was no accumulation of sherds derived from manuring. Nearly all the post-Medieval sherds collected were limited to one part of the site, which was presumably ploughed (see Fig 37).

Metalwork (Grahame Appleby and Andrew Hall; see Fig 38)

Silver

<2040> MD 62: Hammered silver half-groat of Charles I; shield on the reverse. Diameter 17mm. 17th century.

Copper Alloy

<2041> MD 65: Very worn George III half-penny. Diameter 27mm, weight 7g. 18th century.

<2042> MD 68: Piece of copper alloy with rounded rim, probably a coin fragment, measuring 16mm x 12mm and 1mm thick. Undated.

<2043> MD 71: Very worn Georgian half-penny. Diameter 27mm, weight 6g. 18th century.

<2047> MD 72: Hand punched thimble with spiral punched dot pattern, measuring 18mm tall and 17mm in diameter at its base; weight 4g. 18th century.

<2044> MD 79: Pierced flat disk, possibly a coin, measuring 14mm-16mm, weight <1g. Undated.

<2049> MD : 70: Small broken oval frame buckle with off-set narrow bar, with transverse groove decoration measuring 16mm x 23mm, weight 3g. Similar examples date from *c*. 1350-1450 (Egan & Pritchard 2004). Medieval

Lead

<2056> MD 74: Spheriodal large-gauge lead-shot. Diameter 7-8.5mm, weight 2g.

<2057> MD 80: Large irregular lump of lead; 26mm x 42mm, weight 128g.

Iron Metalwork

<1851> K11: Heavily corroded and concreted nail with head and part of shank surviving; the head may originally have been pyramidal in shape. Rectangular cross-section the nail measures 87mm long, weight 75g. Undated; possibly Roman or Medieval.

<2045> AC11: Small square cross-sectioned bar, bent over or clenched at one end. Length 45mm, width c. 5mm, weight 3g. Undated.

<2046> MD 60: Broken tanged knife blade with a transverse break, length 118mm, width *c*. 18mm, weight 30g. Post-Medieval.

<2047> MD66: Irregular shaped lump, possibly a corroded shank or bar fragment, length 22mm, weight 2g. Undated.

<2048> MD 67: Very corroded fragment nail shank, length 34mm, weight 2g. Undated.

<2050> MD 73: Approximately half of a nail head and stub of the shank, width 9mm to 15mm; weight 1g. Undated.

<2051> MD 75: Two corroded and probably refitting fragments of tapering rectangular cross-sectioned bar, total length *c*. 55mm, weight 19g. Possible knife blade. Undated.

<2052> MD 76: Small irregular angular lump measuring between 8mm and 11mm in length/width, weight <1g. Undated.

<2053> MD 77: Small irregular angular lump with a rounded smooth surface on one side measuring between 9mm and 12mm in length/width, weight <1g. Undated.

<2054> MD 78: Corroded tapering triangular shaped fragment 35mm long and 26mm wide at the widest point, weight 12g. Possible fragment from an agricultural implement. Undated.

<2055> MD 81: Very corroded tapering bent nail fragment with rectangular cross-section, 55mm long and 5mm to 7mm wide, weight 6g

Test Fields

Field 28a, b and c

Field 28 (TL 2590 6758) is located directly to the south-west of Ermine Street, the course of the A1198 (Fig 10, Fig 39). The geology is Boulder Clay, with some natural flint and gravel, especially to the east of the field. Visibility across the field was generally good, with only minimal crop cover, although bright sunshine was periodically a hindrance. 28a was located towards the west of the field. Here, six squares (0.06ha) were walked. Nine squares (0.09ha) were walked in Field 28b in the east of Field 28. The main area targeted in Field 28 was 28c, adjacent to Ermine Street in the south-east of the field, where 30 squares (0.30ha) were walked.

Flint (Lawrence Billington)

Field 28a
A single undiagnostic secondary flake was collected from grid square A3.

Field 28b
A large unworked burnt chunk of flint weighing 69.8g was collected from grid square C2.

Field 28c
A small assemblage of 11 worked flints weighing 77.2g and two unworked burnt chunks weighing 11.5g (see Fig 39). The assemblage is composed solely of unretouched removals of mixed chronology. The flint was of good quality, and appeared to derive solely from secondary deposits. Edge damage was frequent and the majority of the assemblage was broken. Two blades were both heavily patinated, in contrast to the fresh condition of the remaining flints.

Grid Square	Chip	flake	Blade	**total worked flint**	unworked burnt chunk
A5	1			1	
B4	1			1	
B7					1
C5			1	1	
C6	1	1	1	3	
C7		1		1	
D1		2		2	
D5	1			1	
E5		1		1	
F3					1
Totals	4	5	2	11	2

Table 9: Flint from Field 28c

The two patinated blades represent careful, specialised blade production strategies dateable to the Mesolithic or earlier Neolithic. The remaining material is chronologically undiagnostic, consisting of hard hammer flakes of varied morphology which are most economically seen as representing later Neolithic/Bronze Age flint working.

Field 61

Field 61 (TL 3654 6487) is located approximately 500m north of the village of Lolworth, adjacent to the current route of the A14 (see Fig 19, Fig40). To the south of the field is a chalk ridge, sloping down onto clay towards the north and east. Both 61a and b were located on the clay approximately two-thirds of the way down the slope. Conditions for fieldwalking were poor, with 30-40cm high wheat and bright sunshine. 61a, in the north of the field consisted of 9 squares (0.09ha), while 61b, located to the east was 25 squares (0.25ha).

Flint (Lawrence Billington)

Two unworked burnt flints with a combined weight of 7.3g were recovered from grid squares B1 and B2 (see Fig 40)

Field 72

Field 72 (TL 3911 6353) is situated on gravel, directly to the north east of the A14, approximately 250m south-west of Slate Hall Farm (see Fig 20, Fig 40). At 72a 40 squares (0.40ha) were walked in the south-eastern end of the field. Visibility was acceptable, with 20-30cm wheat and mild sunshine followed by overcast weather.

Flint (Lawrence Billington)

A small assemblage of 14 worked flints weighing 70.3g and two unworked burnt chunks weighing 10.7g were recovered form field 72a (see Fig 40). The material represents activity from the Mesolithic/earlier Neolithic to at least the later Neolithic.

The flint was of good quality, and appeared to derive solely from secondary deposits. Edge damage was frequent, although the majority of the assemblage was unbroken. All three blades and the blade core were patinated, in contrast to the fresh condition of most of the remaining flints, suggesting that patination has some chronological significance in this assemblage.

Grid Square	flake	blade	blade like flake	scraper	blade core	**total worked flint**	unworked burnt chunk
B3							1
B5							1
D5	1					1	
D6		1				1	
E5	1					1	
E6	1					1	
F2			1			1	
F3		1		1		2	
F4		1				1	
F7	1	1			1	3	
G5	1					1	
G6	2					2	
Totals	7	4	1	1	1	14	2

Table 10: Flint from Field 72

The high number of blade products, including four blades and a systematically worked single platform blade core demonstrate that much of the activity represented by this assemblage is Mesolithic or earlier Neolithic in date. However, the only retouched form, a finely retouched end-scraper is more likely to be later Neolithic or Early Bronze Age in date and the flake material may also date to this general period.

Field 72b
An undiagnostic secondary flake was collected from grid square G7, with two chips recovered from grid squares G8 and B7.

Field 73a

Field 73a (TL 3925 6346) lies directly to the south-east of Field 72a, separated only by a narrow farm track (see Fig 20, Fig 40). 38 squares (0.38ha) were walked under conditions similar to those for Field 72a and only two undiagnostic chips were collected.

Field 76a

Field 76a (TL 3942 6287) is located on gravelly clay, immediately to the south of Junction 30 (Oakington) of the A14 (Fig 21, Fig 41. In total 18 squares (0.18ha) were walked and conditions for fieldwalking were generally good with minimal crop cover (<10cm) and moderate sunshine, although fallen leaves obscured approximately of 10% of the ground in the western row of squares.

Flint (Lawrence Billington)

Five flints were recovered from this field. Two (from A1 and A4) are wholly cortical and may well be plough struck rather than humanly flaked. A patinated flake fragment from B1 bears technological traits suggestive of Mesolithic or earlier Neolithic technologies. The remaining flakes from B3 and A4 are small hard hammer struck tertiary removals; these pieces are chronologically non diagnostic but are likely to belong to later activity than the B1 flake.

DISCUSSION

The fieldwalking programme recovered artefactual material from a variety of periods, reflecting both evidence of landscape 'activity' and occupation sites. The majority of finds made were of prehistoric worked flint, with some expected variability in distribution and recovery of flint scatters between gravel and clay geologies. Whilst some of the large ditched sites visible on geophysical survey produced a ploughsoil signature through finds of pottery e.g. Roman finds from Sites 1, 2 and 3, others (presumed to be Iron Age in date) were not defined by pottery – either due to crop cover or the low density of associated ceramic material.

Medieval

Finds from the Medieval period were recovered at a variety of locations along the entire route on both gravel and clay geologies and were thought to represent manuring practices. The small assemblages of pottery and metalwork from total collection sites 1 and 3 would appear to reflect the general agricultural activity within the vicinity of medieval Brampton and Offord Cluny. No evidence was found to indicate any pockets of hitherto unknown settlement.

Fields containing ridge and furrow remains were noted along the route in fields 16, 44 and 84. A systematic study of archive air photos for the route (Palmer 2003) has indicated that (in-line with other areas of Cambridgeshire), once extant ridge and furrow has disappeared since 1945 due to the intensification of agriculture.

Saxon

The finds of pottery of probable Early to Middle Saxon date at Site 1 are unusual during fieldwalking, and it is therefore not unreasonable to expect that there may be some kind of settlement activity in the near vicinity. The lighter soils of the Brampton terrace have been proven to be rich in occupation of the Neolithic to Roman periods, but this find is significant in that it indicates the possibility of a hitherto unknown area of Saxon activity away from the assumed nodes of the nearby historic settlements at Brampton and Buckden.

The pottery at Site 1 was recovered adjacent to a small backfilled quarry and the context may not therefore be 'pristine'. However, even if the assemblage represents truncated features, it is possible there may be more in the near vicinity, it being favourably situated above the floodplain of a (now-canalised) small stream. A series of large pit-like features visible on geophysical survey close to this location (Preconstruct Geophysics 2008) may be evidence of Saxon settlement.

Roman

Roman finds appeared to closely correlate with evidence from the preceding geophysical survey which identified a series of linear features in the wider vicinity of Site 1 / Field 10 and a major settlement at Site 3 East / Field 18. The finds from Site 3 comprised ubiquitous 2nd-4th century pottery, tile and a coin and the low distribution in Site 3 West / Fields 17 and 17a, also mirrored the results of the geophysical survey (Bartlett 2009) which showed few features between the existing rail line and the River Ouse.

The absence of further Roman finds along the off-line section of Boulder Clay between Site 3 East and Hilton also corresponds to a general lack of features detected by the geophysical surveys (Preconstruct Geophysics 2008, Bartlett 2009). Air photos of this part of the route do not include any suitable 'drought' photography that would yield the kind of clay cropmark results that were found adjacent to St Neots (Palmer 2007). It is considered that any 'robust' sites which might have evaded geophysical or air photo survey would have left a ploughsoil signature of pottery and building material such as that detected at Site 3 East. Whilst Roman road-side activity is known along the A1198 (Ermine Street), only prehistoric flint was recovered from adjacent fields and it is probable that any major settlement is focused around the Roman small town of Godmanchester to the north.

Prehistory *(with Lawrence Billington)*

The majority of finds recovered from the fieldwalking (95% of hand recovered artefacts) comprised prehistoric flintwork from the Mesolithic to Bronze Age periods. These were variously interpreted as evidence of 'occupation', expedient flint knapping or a 'background noise' indicative of prehistoric activity on both the gravel and Clay.

The assemblages of flintwork collected during the fieldwalking suffer from the familiar interpretative problems common to material derived from surface deposits. Firstly, there is the relatively small size of assemblages recovered. Some key characteristics of assemblages numbering more than 10 worked pieces are shown in Table 11, but in most cases the sample size is too small for these results to be effectively compared with one another. Dating of surface collections of lithics can be problematic and the analysis of these assemblages has generally relied on a broad distinction between Mesolithic and earlier Neolithic on the one hand and later Neolithic and Bronze Age material on the other, with occasional diagnostic pieces adding some chronological refinement.

Site/Field	Number of worked flint	Blade products (%)	Retouched (%)	density (average per 10m square)
Site 1	60	10	6.6	
Site 2	24	0	0	
Site 3 East	80	7.5	1.25	0.4
Site 3 West	364	2	3.2	1.3
Field 28c	11	18.2	0	
Field 72a	14	3.6	7.1	

Table 11: Flint by site

Mesolithic/earlier Neolithic

Most of the fieldwalking sites produced some evidence of Mesolithic/earlier Neolithic activity in the form of blade-based technologies. These blade products were always outnumbered by flake-based material of later date, although they were a persistent presence, with only Site 2 producing no convincingly early material. The proportion of blade-based material within assemblages varied considerably. Of the larger assemblages, Site 3 West produced a relatively high percentage, coinciding with the highest densities of worked flint encountered during the fieldwork. Although only representing a very small sample, the assemblage from Field 28c contained a very high percentage of blade products within the normal parameters for single period sites dating to the Mesolithic/earlier Neolithic (Ford 1987: 73), possibly indicating a relative dearth of later activity in the area. The differences in material between Sites 3 East and West are intriguing as the division between the two is somewhat arbitrary, being a modern railway line. Considering the much poorer representation of blade-based material at Site 3 West it was thought that distribution may show a gradual reduction of this earlier material from East to West or perhaps to the West of the sterile alluvial material. However, this did not prove to be the case and, frustratingly, any differences in the composition of the assemblages appears to have taken place in the unsurveyed area beneath the railway.

Low numbers of retouched tools are typical for earlier assemblages of worked flint and the A14 fieldwalking assemblages proved no exception. This lack of tools also hampers chronological understanding of the assemblages as diagnostic pieces are mostly absent. Only two retouched forms could confidently be associated with this period, a Mesolithic microlith from Site 3 East and an earlier Neolithic leaf shaped arrowhead from field 18 (later Site 3 East). These pieces, together with the variety in technological traits and raw material of the blade material, suggest activity taking place throughout at least the Late Mesolithic and earlier Neolithic.

Later Neolithic/Bronze Age

By far the greater proportion of lithic material recovered from the fieldwork took the form of expedient flake-based technologies. Although having few diagnostic traits the majority of this material can be attributed to later Neolithic/Early Bronze Age flintworking. This material was ubiquitous and only the small sample from Field 28c may be lacking later flintwork, which may be a reflection of the Clay geology (other sites being situated on lighter gravel soild). Amongst this mass of undistinguished flake-based material were several pieces reflecting more closely dateable specialised core reduction strategies. These comprise three discoidal, 'levalloisoid' cores, one from Site 3 East and two from Site 3 West. These distinctive pieces reflect specialised flake production during the later Neolithic, taking place alongside the much less structured core reduction strategies more frequently seen in later Neolithic assemblages.

Retouched tools were relatively scarce, suggesting a lack of intensive 'domestic' activity in most areas surveyed. Retouched forms are dominated by scrapers. Most of the scrapers are consistent with a later Neolithic/early Bronze Age date. The large end scraper from Field 18 is probably somewhat later in date, Middle or Late Bronze Age, whilst the fine sub-circular scraper from site 1 is later Neolithic. Two arrowheads, a chisel type from Site 1 and a barbed and tanged type from Site 3 West reflect later Neolithic and Early Bronze Age activity respectively.

The Scheme fieldwalking assemblages reflect millennia of prehistoric activity from at least the Late Mesolithic to the Middle Bronze Age. The densities of material were uniformly low, especially in contrast with some of the extremely prolific surface scatters in the region (see Gdaniec *et al*. 2007: 80-82). There is little indication of any intensive domestic/settlement type of activity with much of the assemblage probably relating to relatively short term or task specific activities taking place against a background of relatively high residential mobility.

Gravel and Clay

The proposed route contains a mixed geology of gravels and clays that are considered to have both influenced past settlement and cultivation regimes and affected the visibility of the archaeological record. Fieldwalking has recovered prehistoric lithic material from both gravel and clay geologies, although there is a general absence of Iron Age pottery, even where geophysical survey indicates the presence of a site.

The geology along the course of the proposed 'offline' route between Ellington and the Fen Drayton interchange comprises bands of river terrace gravels between Ellington and the River Ouse, an expanse of Boulder Clay between the Ouse and the village of Hilton, and intermittent pockets of terrace gravels and Ampthill Clay up to Fen Drayton where the route re-joins the current A14. Between Conington and Girton the route comprises Ampthill and Gault clays.

It is perhaps unsurprising that prehistoric lithics comprising both 'background noise' and substantial scatters were found on the Brampton Terrace and adjacent to the River Ouse, there being a long history of investigation and publication of prehistoric archaeology on these lighter soils (see Dawson 2000). Of particular note, the Neolithic material recovered at both Site 1 and Site 3 West may be indicative of early settlement evidence that may not be visible to either the geophysical surveys or air photo study that has been conducted to date.

The Mesolithic / Early Neolithic blade assemblage at FD 28c (Boulder Clay) adjacent to the A1198 and FD 72a (Gault / Greensand) adjacent to Slate Hall Farm at Bar Hill

indicate that there was certainly earlier activity on 'inland' non-gravel areas away from major River valleys (doubtless linked to hunting and gathering / woodland foraging). Both sites are reasonably close to water courses with FD 28c located adjacent to a 'plateau' above a small river valley some 800m to the south and which connects to the River Ouse. FD 72a lies adjacent to the Greensand terrace of Oakington Brook, in close proximity to other Mesolithic finds and palaeochannels that were found during previous fieldwork for the proposed Northstowe development (Evans 2005, 2006).

The status of the Boulder and Gault Clay in this area during the Late Neolithic / Early Bronze Age is less clear, and the smattering of flake material including an end scraper at FD72a and FD 28c is not necessarily indicative of permanent settlement or an agricultural regime within the vicinity.

The occurence of Middle or Late Iron Age sites on the Cambridgeshire / Bedfordshire Clay is, however, well documented and recent research using air photos on Boulder Clay with suitable 'drought' photography has demonstrated that settlement is much more widespread than had previously been assumed - *c*.1.5 Iron Age sites per square km (Mills 2007; Palmer 2007). The absence of fieldwalking finds of this period on the Boulder Clay of the proposed route between the Ouse and Hilton (which is a 'rich' landscape; in Bedfordshire or Northamptonshire) may be a reflection of taphonomic issues or recovery rates (a number of fields in this area had unsuitable rape crops). These types of sites are less 'visible' in the ploughsoil archaeological record than Roman pottery or lithic scatters, perhaps only yielding 20% recovery by fieldwalking when compared to suitable air photo analysis of 'drought' photography (Mills 2007).

However, results of geophysical survey did not indicate any Iron Age sites on the Boulder / Oxford Clay, with the exception of Site 3 adjacent to the River Ouse. These same surveys have been effective in finding the ditched enclosures of probable Iron Age sites elsewhere on the route (Preconstruct Geophysics 2008; Bartlett 2009). Such clear results include FD 50 (an enclosure and possible house gully on gravel /Ampthill clay), FD 61 (a series of small and medium-sized enclosures on Ampthill clay), FD 69 (a banjo enclosure and associated settlement on Gault clay, *Site XII, Evans 2005/6*) and FD 81 (linear features and a circular ditch on Gault Clay).

It is thus reasonable to think that there may be a genuine absence of later prehistoric sites on the Boulder / Oxford Clay between Site 3 East and Hilton. It is possible that either a) the proposed road route just misses Iron Age sites in the area or b) that there are local areas of clay that were not intensively utlised (unlike Bedfordshire or Northamptonshire) because they are 'sandwiched' between more favourable gravel terraces or streams that have associated local gravel deposits (D. Hall *pers comm*.)

Future Evaluation Strategy

The fieldwalking has addressed the specific aims and objectives outlined in the introduction and provided avenues for future research through intrusive evaluation trenching. The work has allowed for the formulation of specific recommendations for this fieldwork – both for testing probable 'Sites' and further assessing the

effectiveness of the non-intrusive surveys that have been undertaken throughout the Scheme.

The use of a complimentary suite of non-intrusive surveys gives a higher degree of confidence for the targeting of evaluation areas – such that it is now possible to test sub-surface anomalies shown on the geophysical survey, crop-marks shown on air photos and artefact scatters. The fieldwalking has given a further insight into the different topographical settings of prehistoric finds, especially in relation to the River Ouse, all of which can inform any future evaluation strategy.

Research outcomes and recommendations

The work has located substantial evidence of prehistoric and Anglo-Saxon activity which cannot necessarily be determined from geophysical survey or air photo study. These finds have provided the 'key' to defining further areas for assessment by evaluation trenching:

- FW Sites 1 and 3 East are located within proposed areas of evaluation trenching (*B1* and *C1* respectively) and the results of fieldwalking are able to inform expectations and trench locations. In particular, surface Neolithic and Saxon pottery assemblages at Site 1 are indicative of the potential for Neolithic and Early / Middle Saxon occupation features within the near vicinity

- Site 3 West has yielded a 'new' site that should be included within future evaluation trenching (the part of Site 3 West adjacent to the rail line is already proposed for evaluation as Area C2).

- The substantial quantities of Mesolithic and Neolithic artefacts on the 'knoll' at Site 3 West are only visible due to recent ploughing. However, the fact that part of this area appears to have been covered by alluvium suggests that at least some features may be protected from some of the damaging effects of the last 2,000 years of cultivation / land use. There is a possibility of 'fen-edge' type deposits at this location that might include either buried land surfaces, peat deposits and other waterlogged palaeoenvironmental deposits.

- Whilst surface material at FW Site 2 was not thought to indicate occupation sites like at Site 1 and 3, there is clearly a level of prehistoric and Roman activity in the landscape, and this site should be subject to intrusive evaluation as part of a wider scheme to evaluate the Brampton gravel terrace prior to the Scheme's construction.

- The large amount of pasture adjacent to the River Ouse and in proximity to Site 3 West (field 16 and non-observed land between fields 16 and 17) should be included in a future evaluation trenching scheme because neither air photo evidence nor fieldwalking could provide data for these areas. Geophysical survey of pasture adjacent to Site 3 West indicates the potential for finding both palaeochannels and deep deposits at this point.

The work has not found substantial prehistoric remains on the Clay and Lower Greensand (in contrast to the gravels), although there are indications of Mesolithic activity (presumably in a largely wooded landscape) as well as some 'background noise' of later prehistory.

- Transect walking has uncovered stray flint finds on clay, many of which have have been systematically investigated as 'Test Areas' by Total Collection without yielding evidence for later Neolithic and Bronze Age occupation sites or areas of intensive activity, and these rather reflect 'background noise' possibly in wooded areas. This is in contrast to evidence for Mesolithic activity at two locations on the clay.

- Unlike fieldwalking sites on the gravel, Test Area FD 28c had a large number of Mesolithic / earlier Neolithic blades and a low incidence of later flint-work. This may reflect the lack of later Neolithic and Bronze Age activity on these local clays. Evaluation trenching of this site (Area D1) may give an indication of whether there is any later prehistoric activity on the Boulder Clay at this point.

- Test Area FD 72a has added to our knowledge by expanding the known extent of Mesolithic flint scatters near the Oakington Brook (first identified by fieldwalking in 1992). However, the Test Area falls within a land parcel that has already been evaluated by the CAU in advance of the proposed Northstowe development. This trenching did not locate any further evidence of Mesolithic to Bronze Age activity at this location, although Roman and Iron Age features were found nearby (Evans 2006 Site XXVI). This is in contrast to evaluation trenching adjacent to Oakington Brook some 1km from FD 72a where trenching located sub-soil Mesolithic flint scatters and a number of Mesolithic flint picks (Evans 2005, Site XXVIII).

Some types of archaeological sites are clearly not 'visible' to fieldwalking and it is expected that future trenching will further clarify the status of Iron Age and earlier remains, especially on the clay areas. Whilst not all land was observed by fieldwalking, there are opportunities for future trenching evaluation to test whether those areas with low fieldwalking finds or geophysical anomalies are devoid of archaeological remains.

- Of the 35% of land that could not be observed, some 10% is pasture which will not be available for future walking. Of the remaining areas of land, a relatively high percentage was rape crop on clay geology (especially Boulder Clay near the A1198). These areas might be re-visited either by fieldwalking or test areas of trenching at suitable topographic positions (e.g. near streams) in order to further verify the results concerning Roman and later prehistoric land use in this area.

- The fieldwalking has not located evidence of Iron Age activity, although the geophysical survey suggests that there are a number of 'robust' Iron Age ditched sites on the route. Future intensive evaluation trenching (a 5% by area sample) of these sites and their wider environs will lead to better understanding of whether there are any earlier prehistoric remains e.g Early

Iron Age or Bronze Age features which cannot be detected by fieldwalking, geophysical survey or air photo study.

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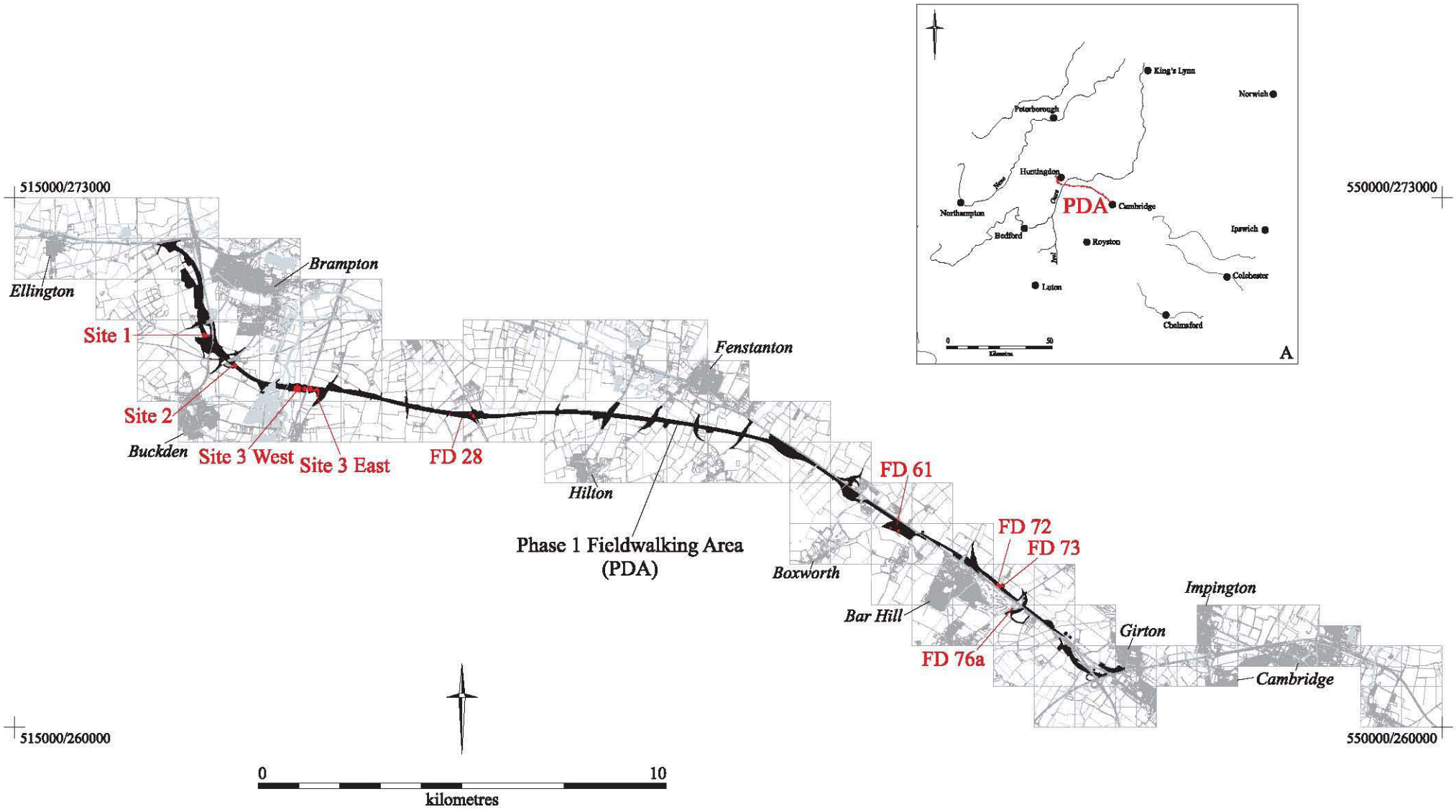


Figure 1. Location map

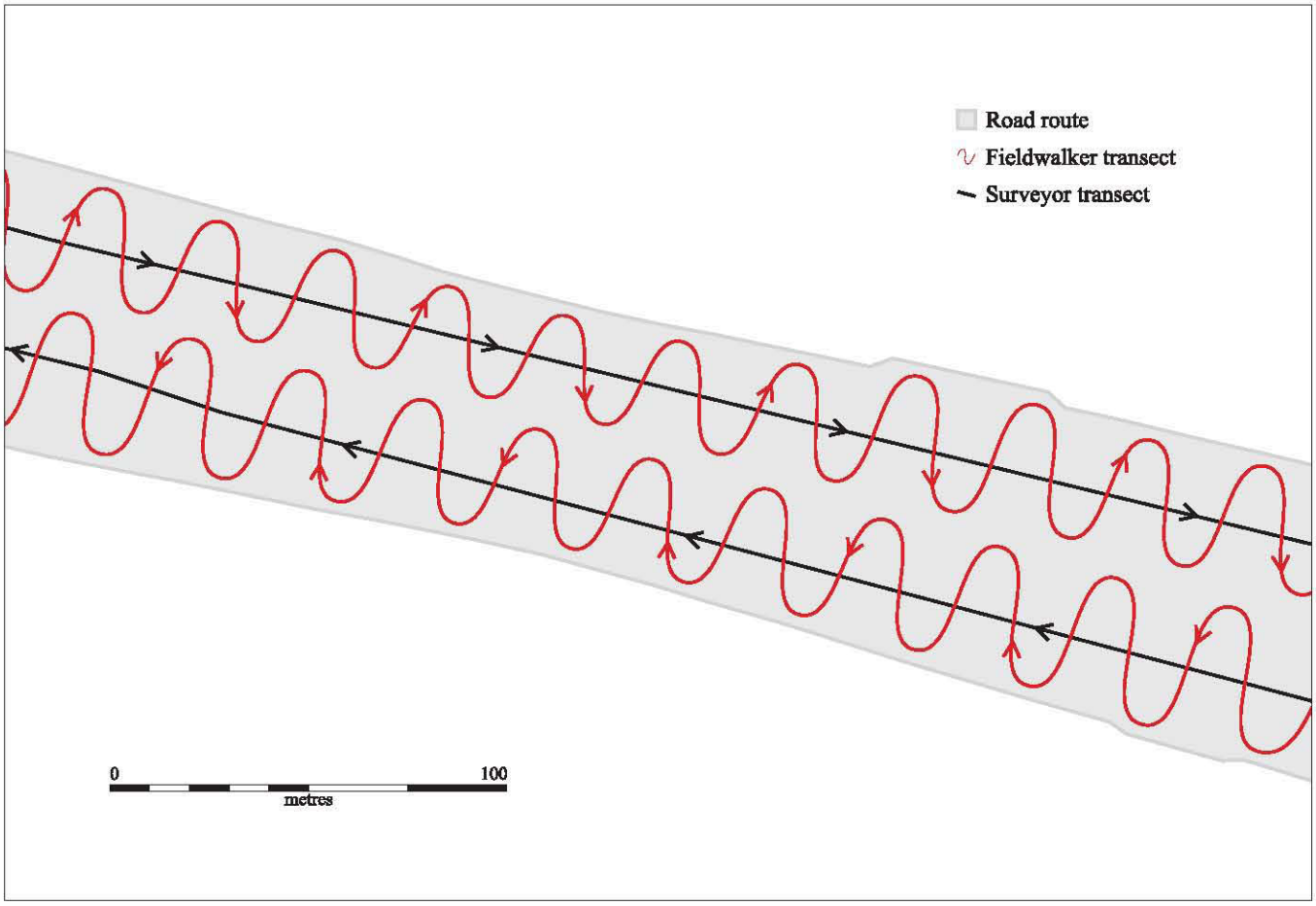


Figure 2. Phase 1 fieldwalking method

Key for Figures 4-23

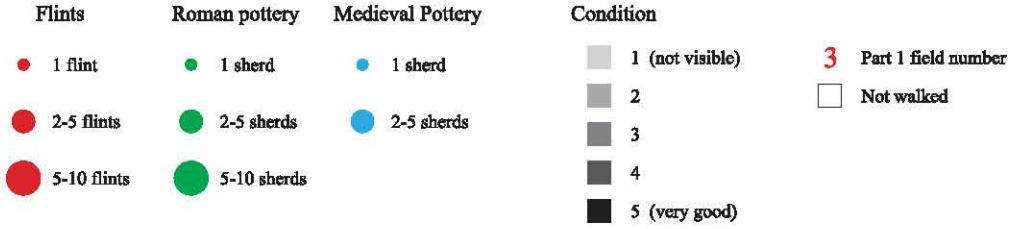


Figure 3. Location and key for Figures 4-23

Figure 4. Phase 1 fieldwalking results and field conditions; Fields 3-9 (northern end of route)

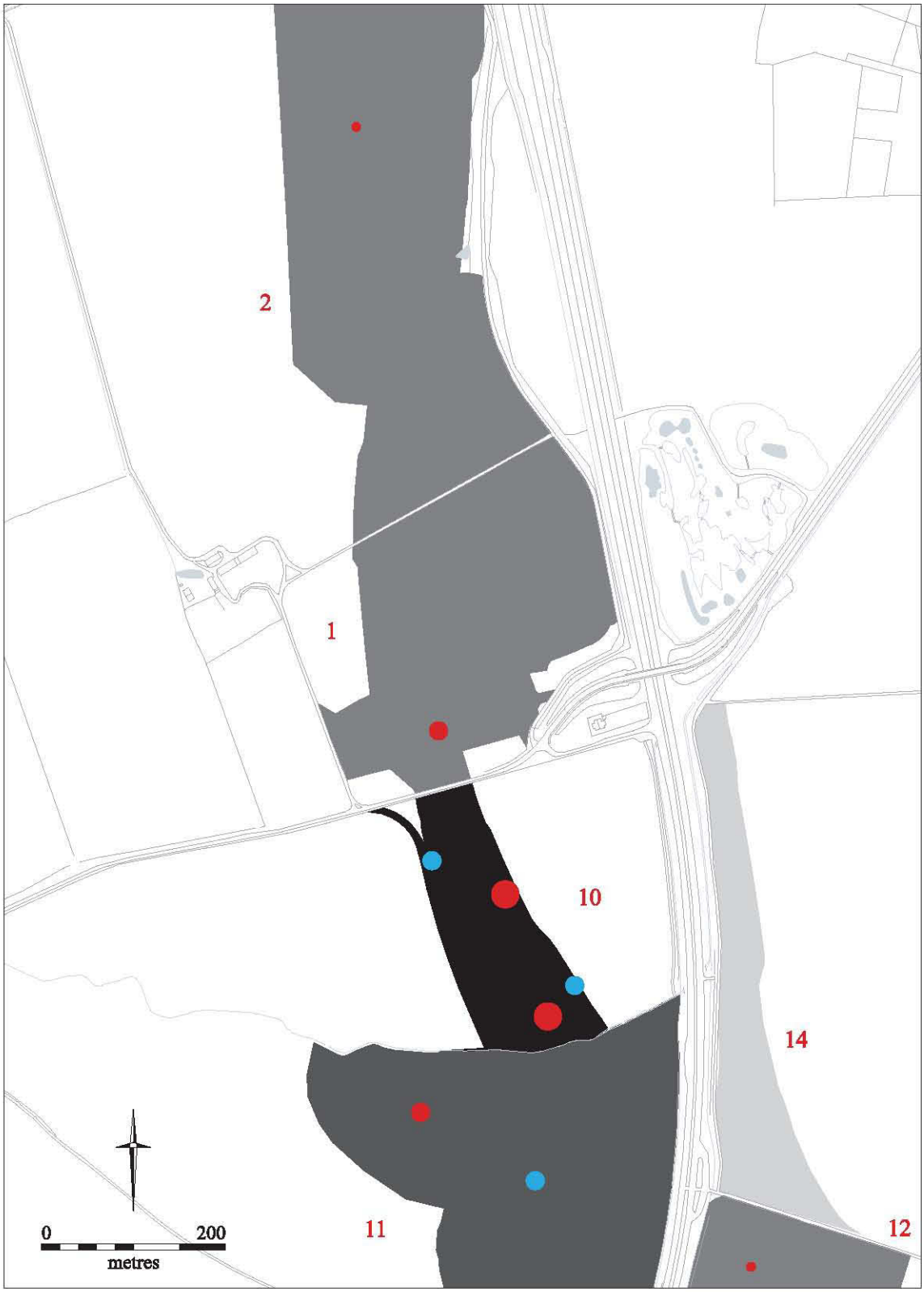


Figure 5. Phase 1 fieldwalking results and field conditions; Fields 1-2, 10-12 and 14

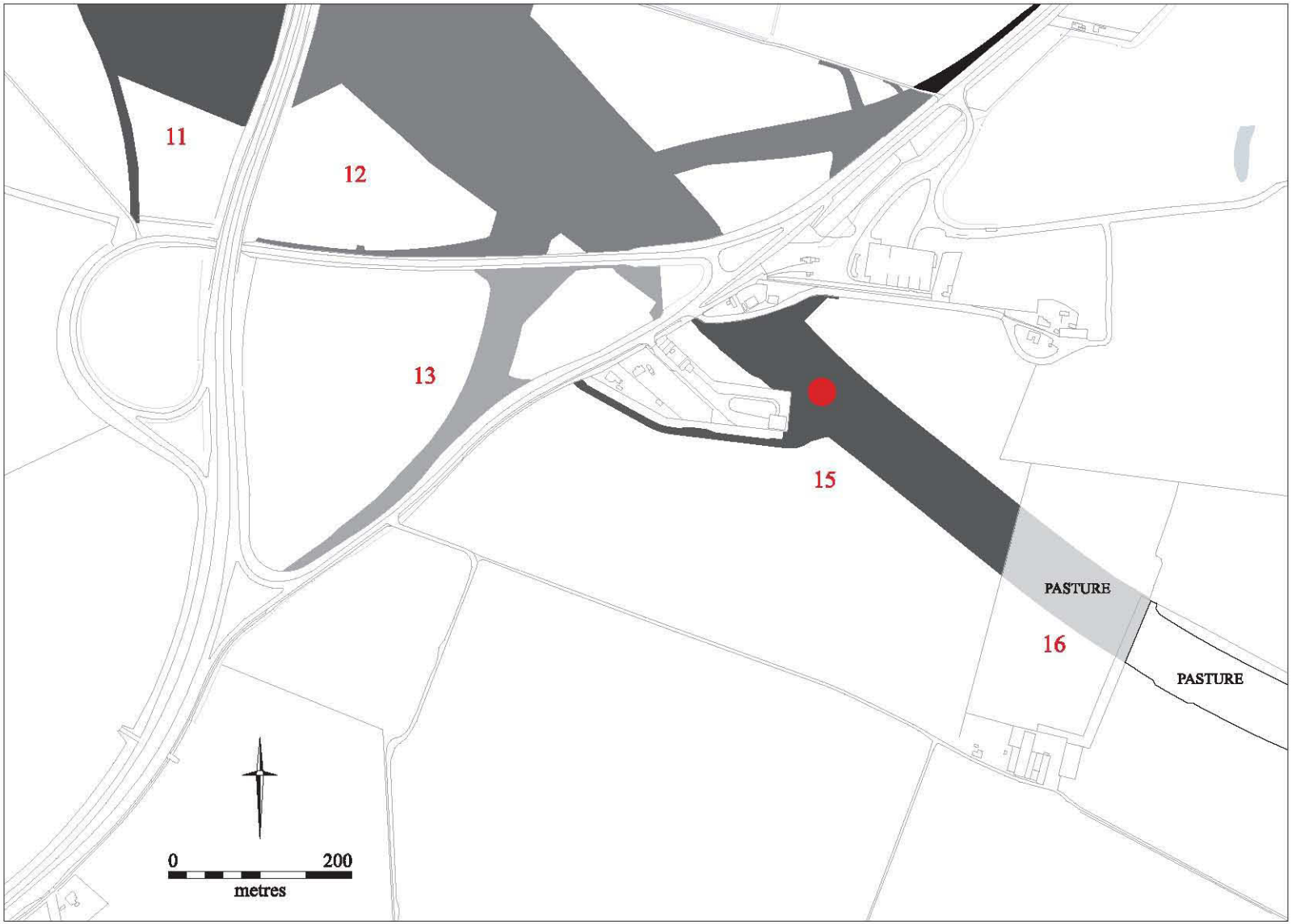


Figure 6. Phase 1 fieldwalking results and field conditions; Fields 11-16

Figure 7. Phase 1 fieldwalking results and field conditions; Fields 17-18

Figure 8. Phase 1 fieldwalking results and field conditions; Fields 18-22

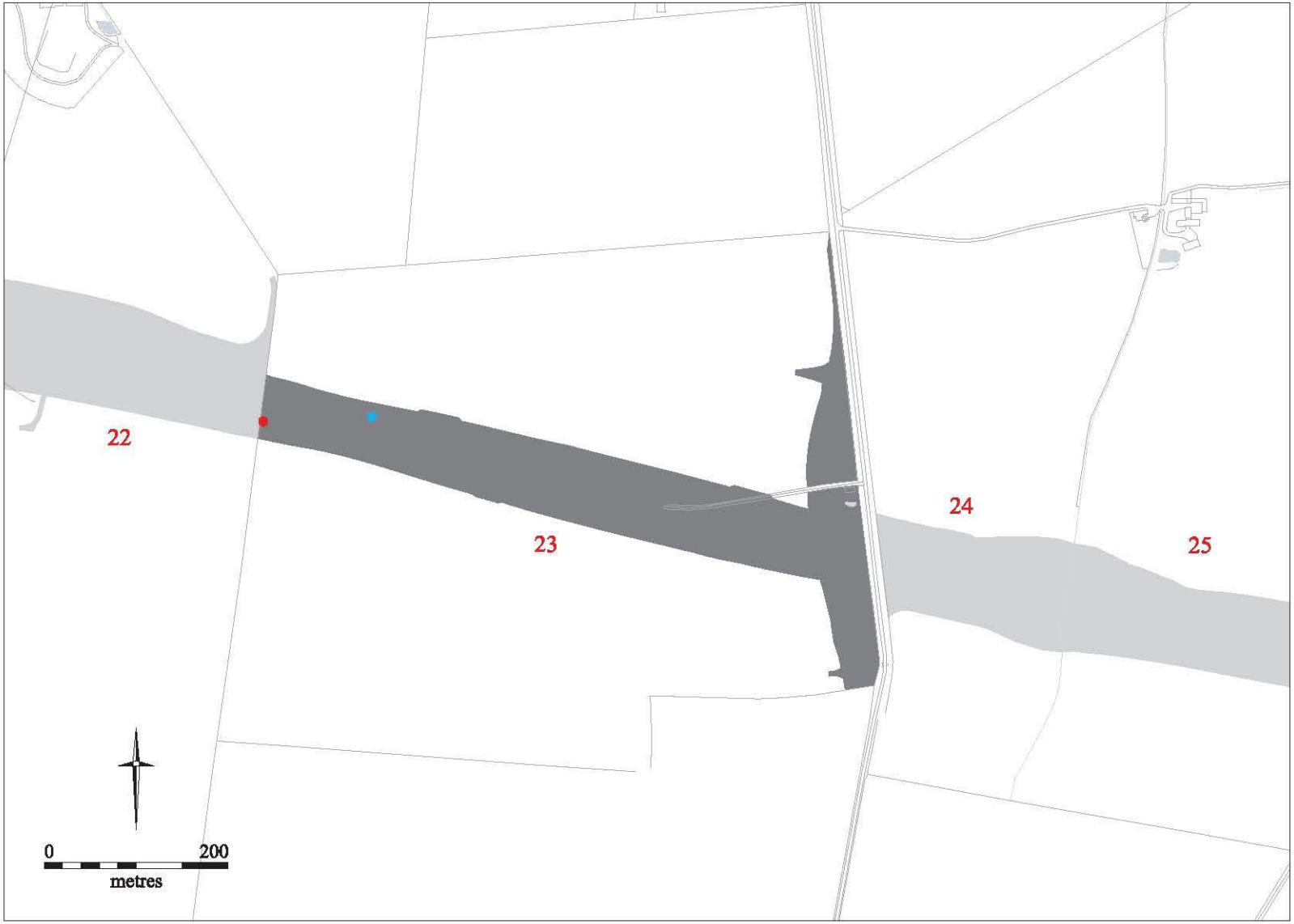


Figure 9. Phase 1 fieldwalking results and field conditions; Fields 22-25

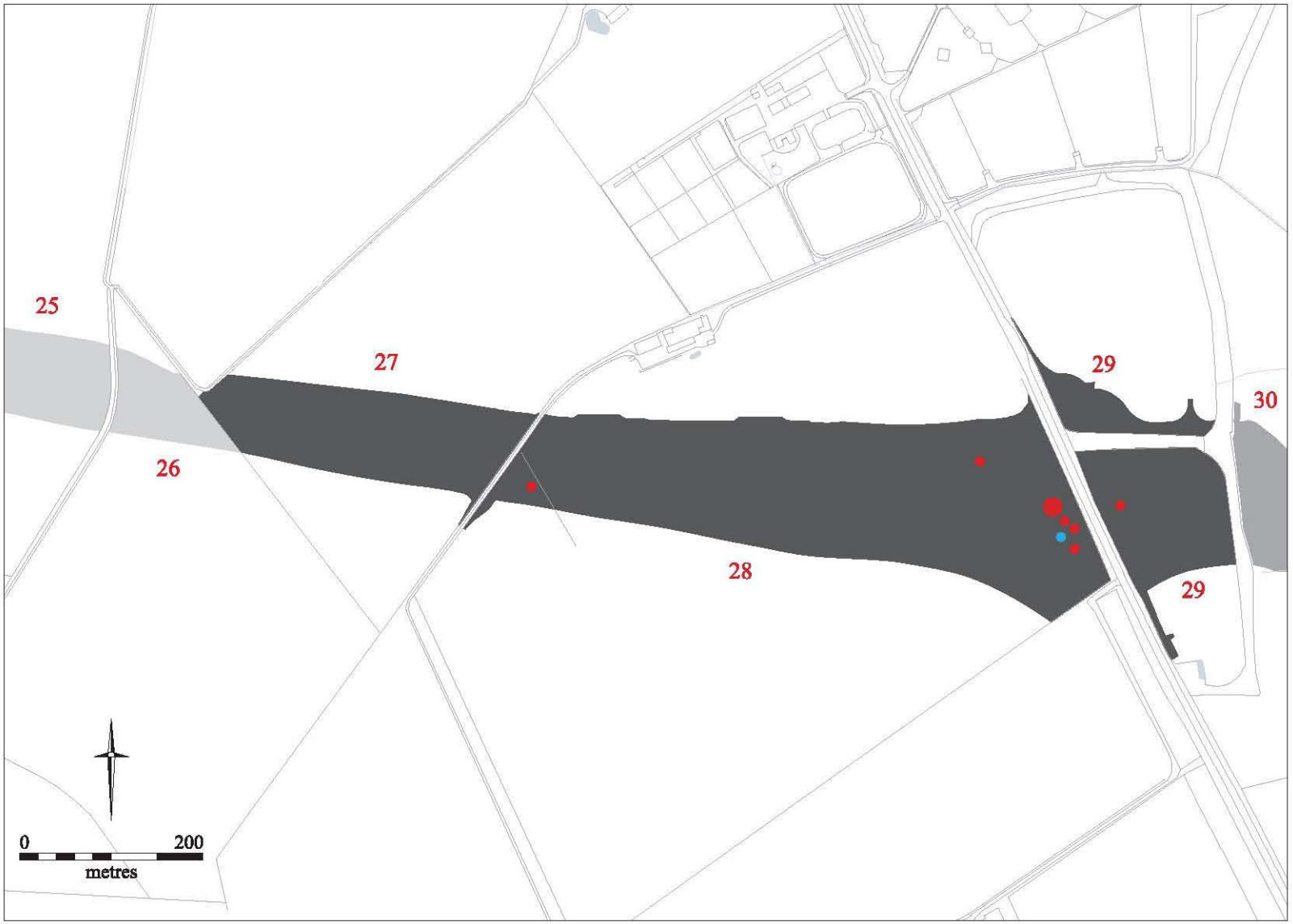


Figure 10. Phase 1 fieldwalking results and field conditions; Fields 25-30

Figure 11. Phase 1 fieldwalking results and field conditions; Fields 30-34

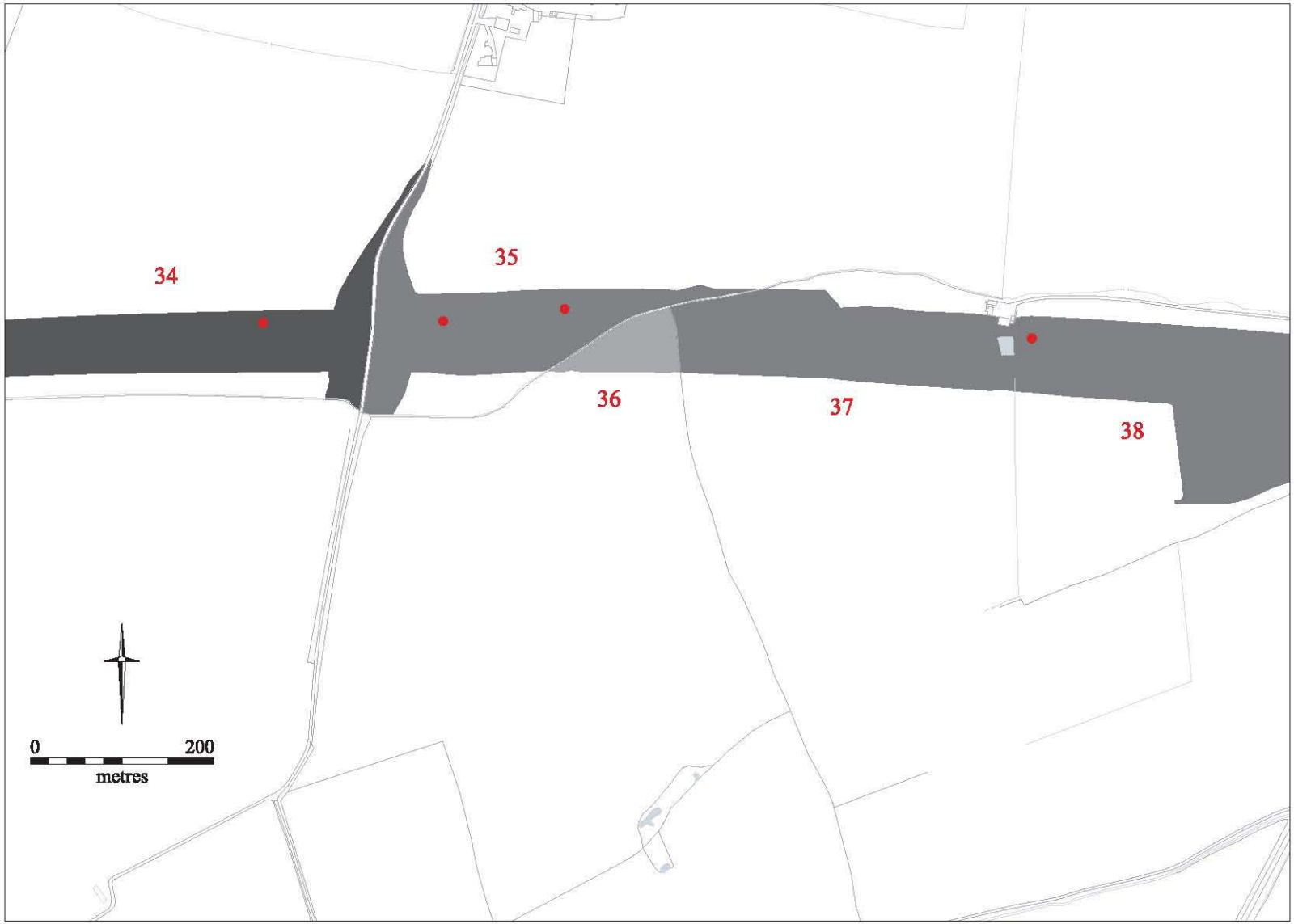


Figure 12. Phase 1 fieldwalking results and field conditions; Fields 34-38

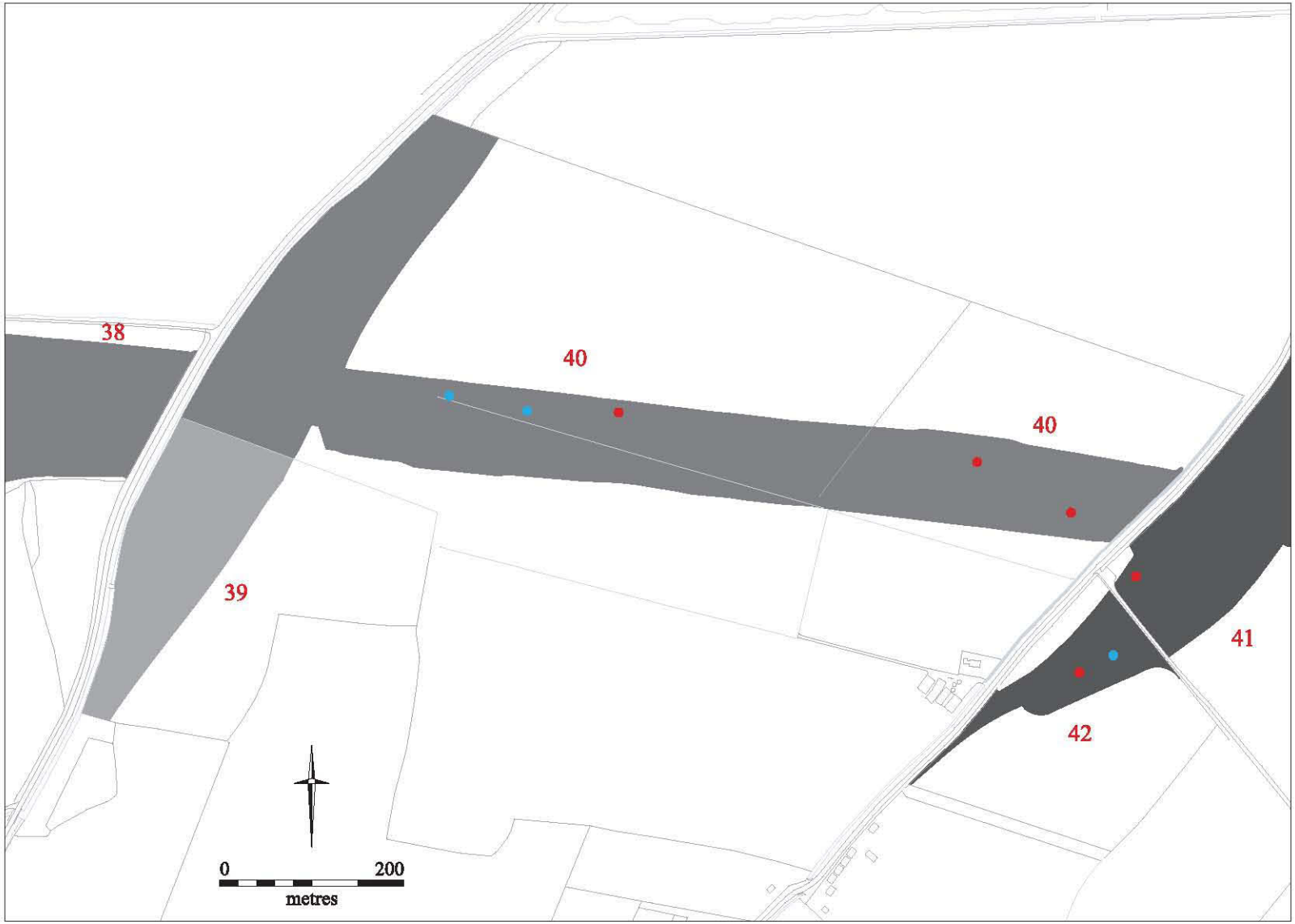


Figure 13. Phase 1 fieldwalking results and field conditions; Fields 38-42

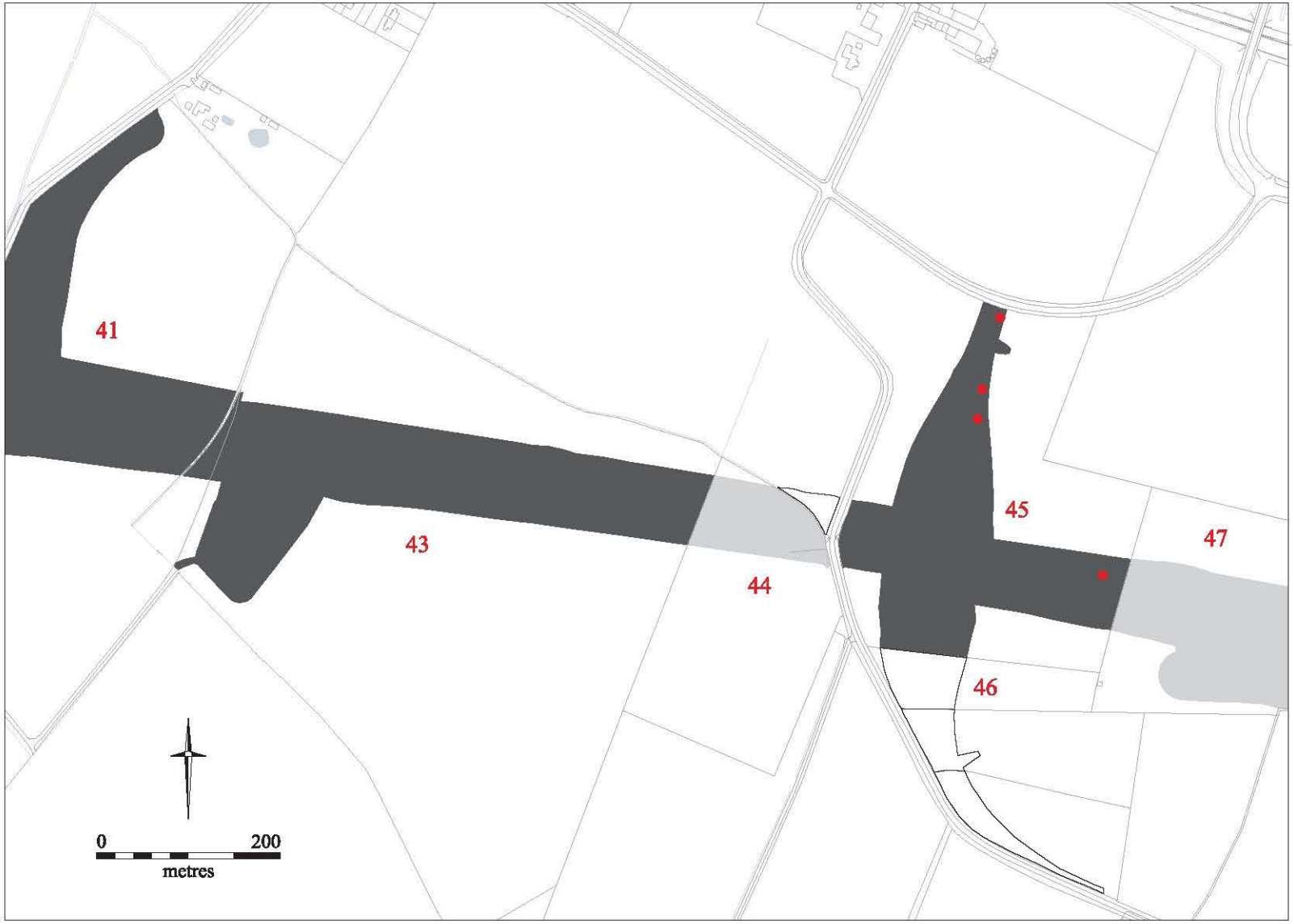


Figure 14. Phase 1 fieldwalking results and field conditions; Fields 41-47

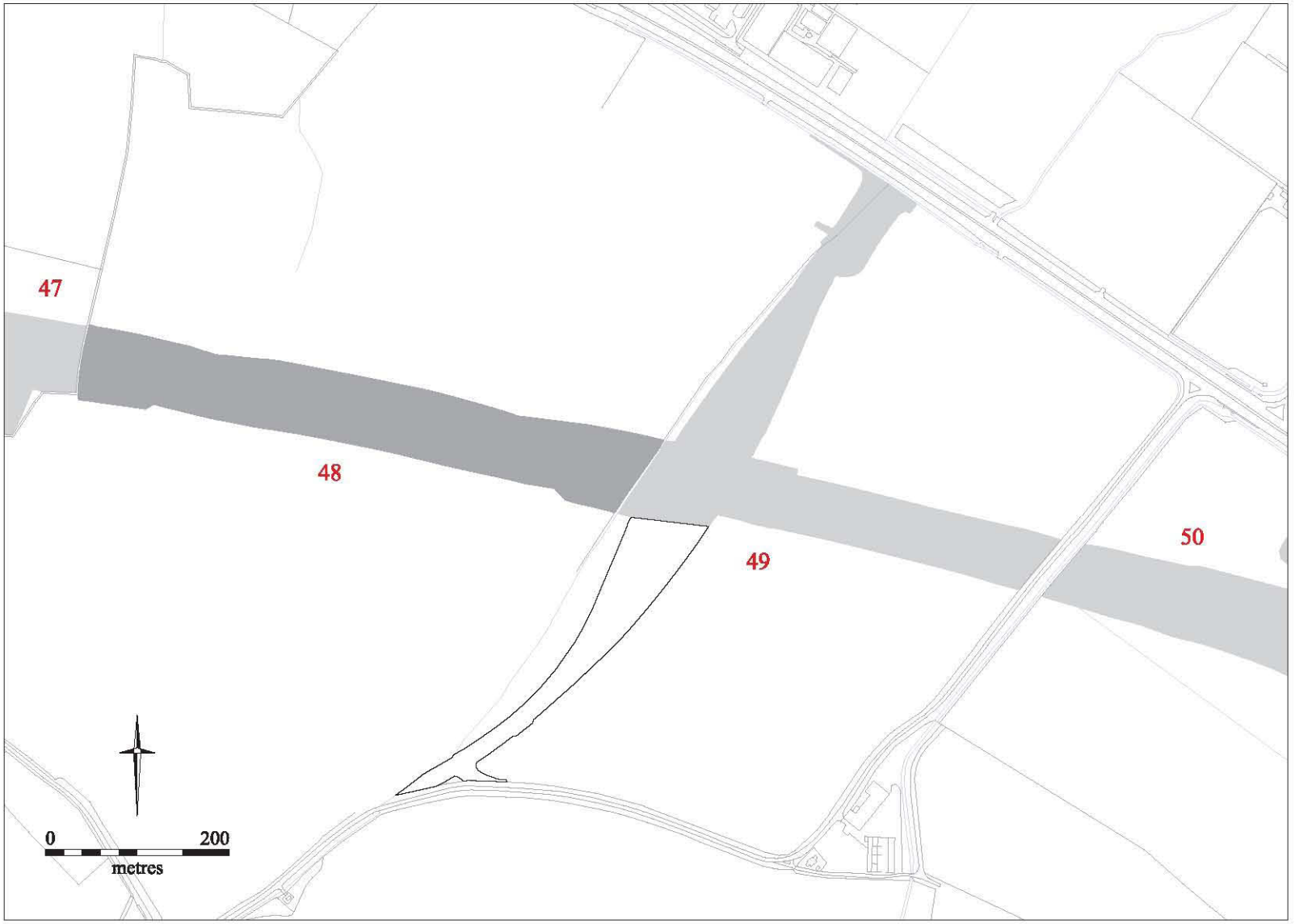


Figure 15. Phase 1 fieldwalking results and field conditions; Fields 47-50

Figure 16. Phase 1 fieldwalking results and field conditions; Fields 50-52

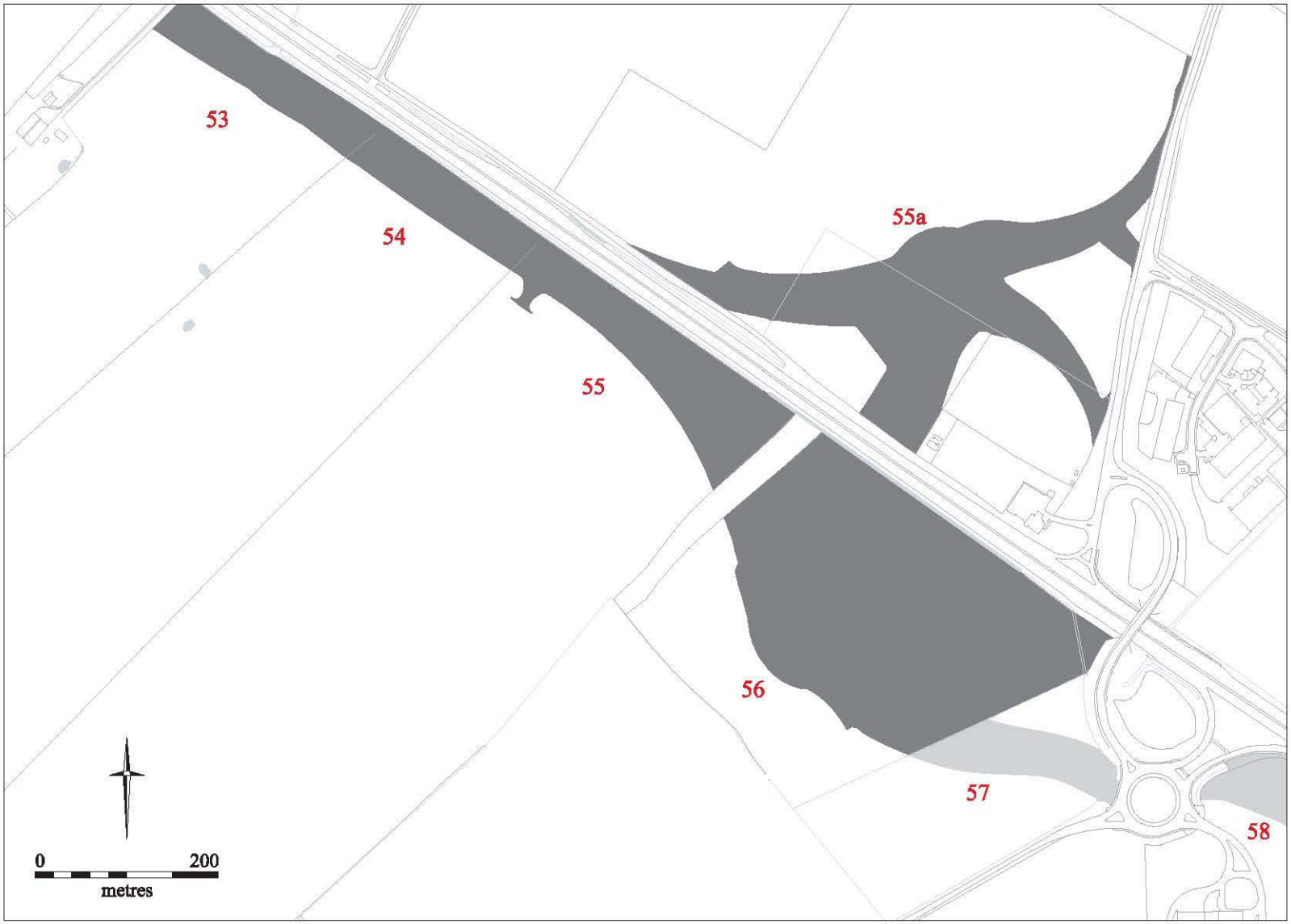


Figure 17. Phase 1 fieldwalking results and field conditions; Fields 53-58

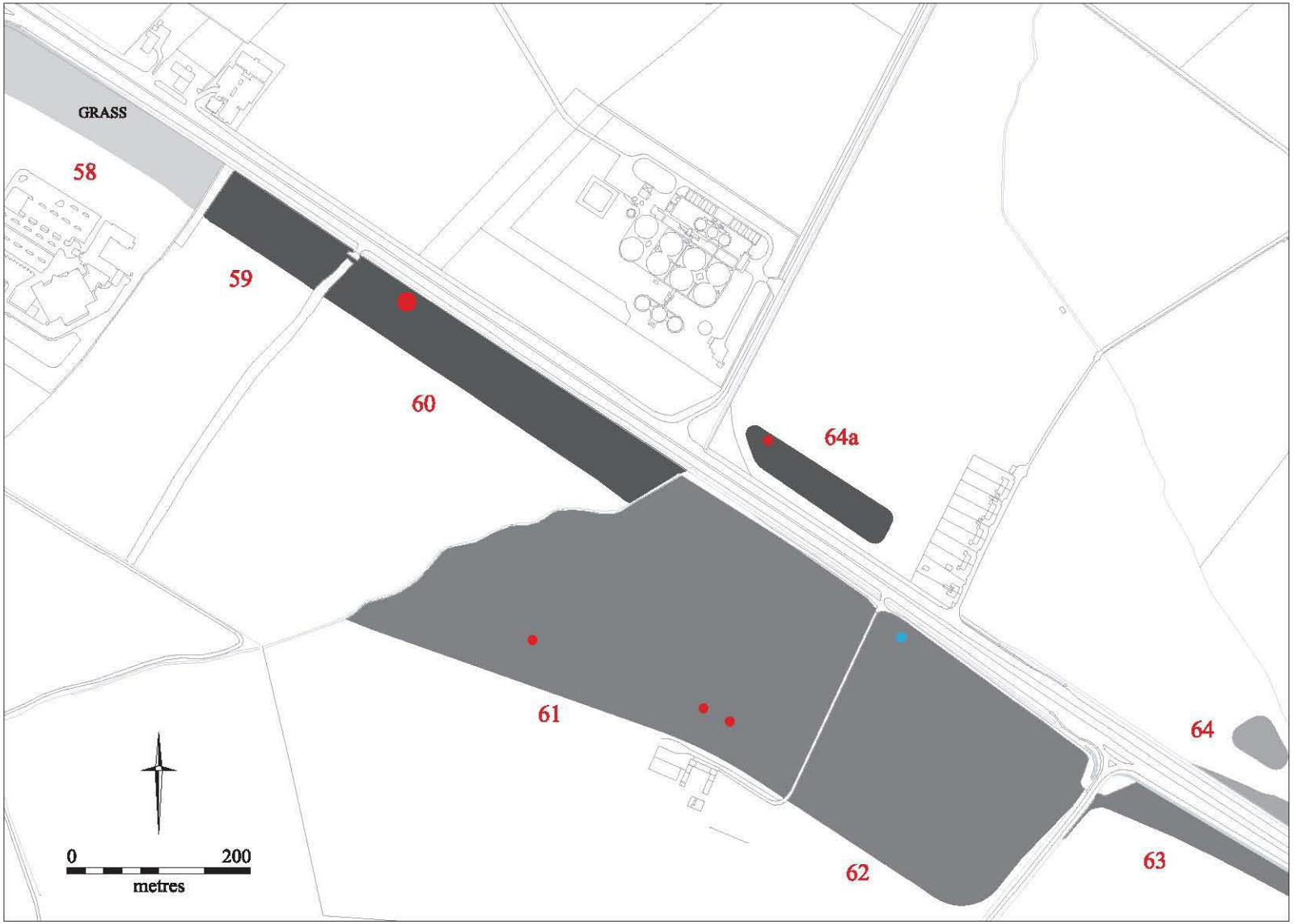


Figure 18. Phase 1 fieldwalking results and field conditions; Fields 58-64a

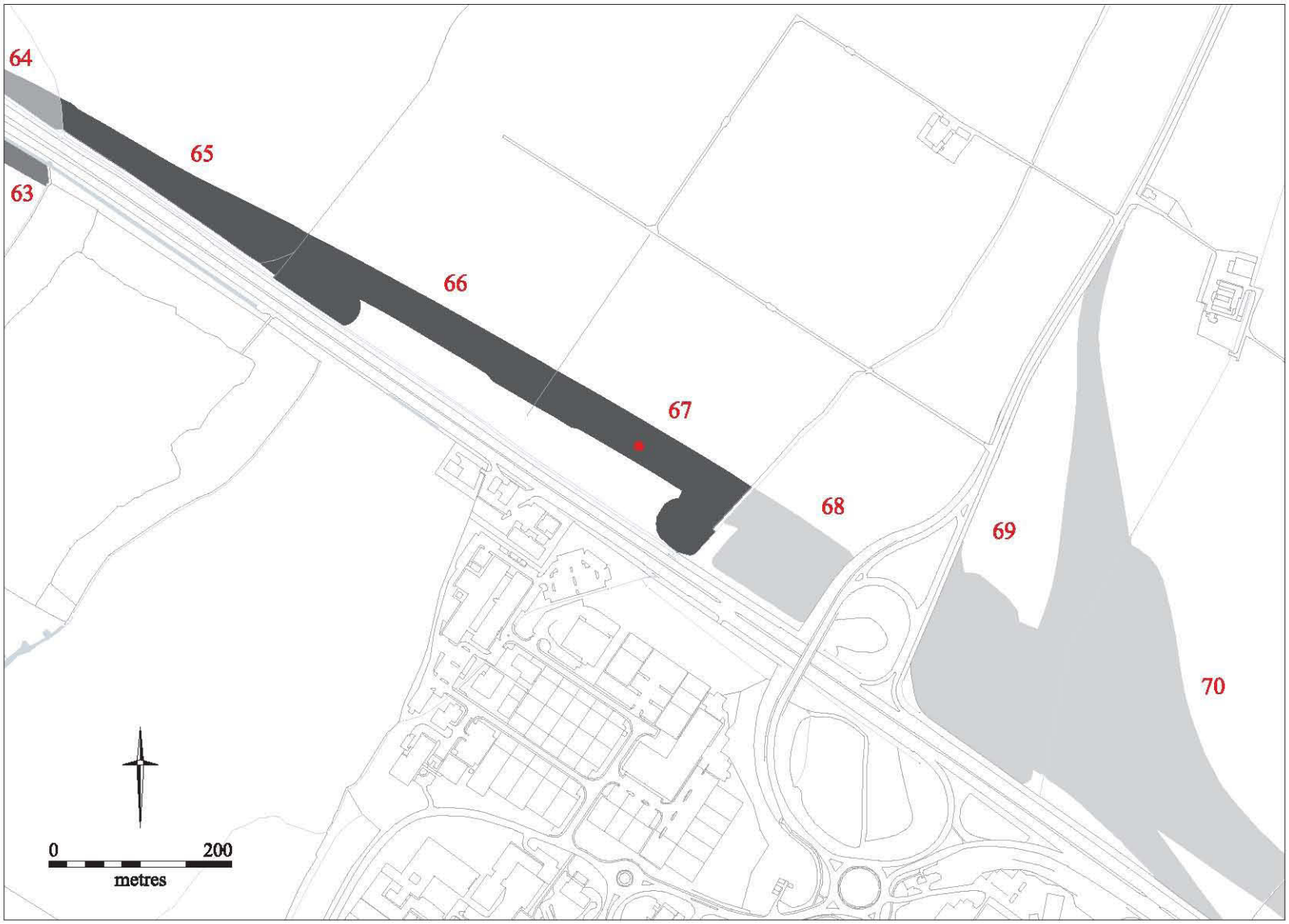


Figure 19. Phase 1 fieldwalking results and field conditions; Fields 63-70

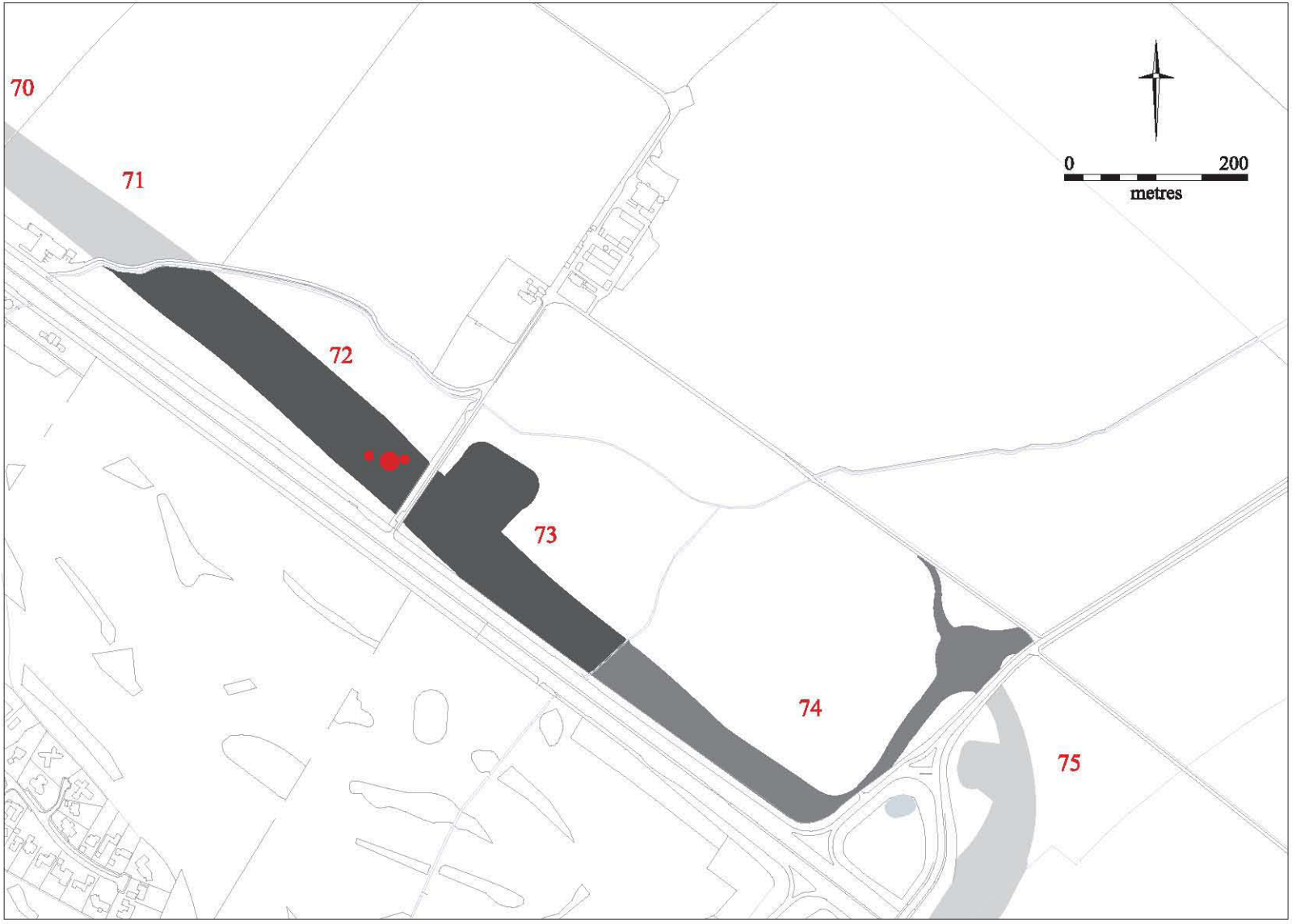


Figure 20. Phase 1 fieldwalking results and field conditions; Fields 70-75

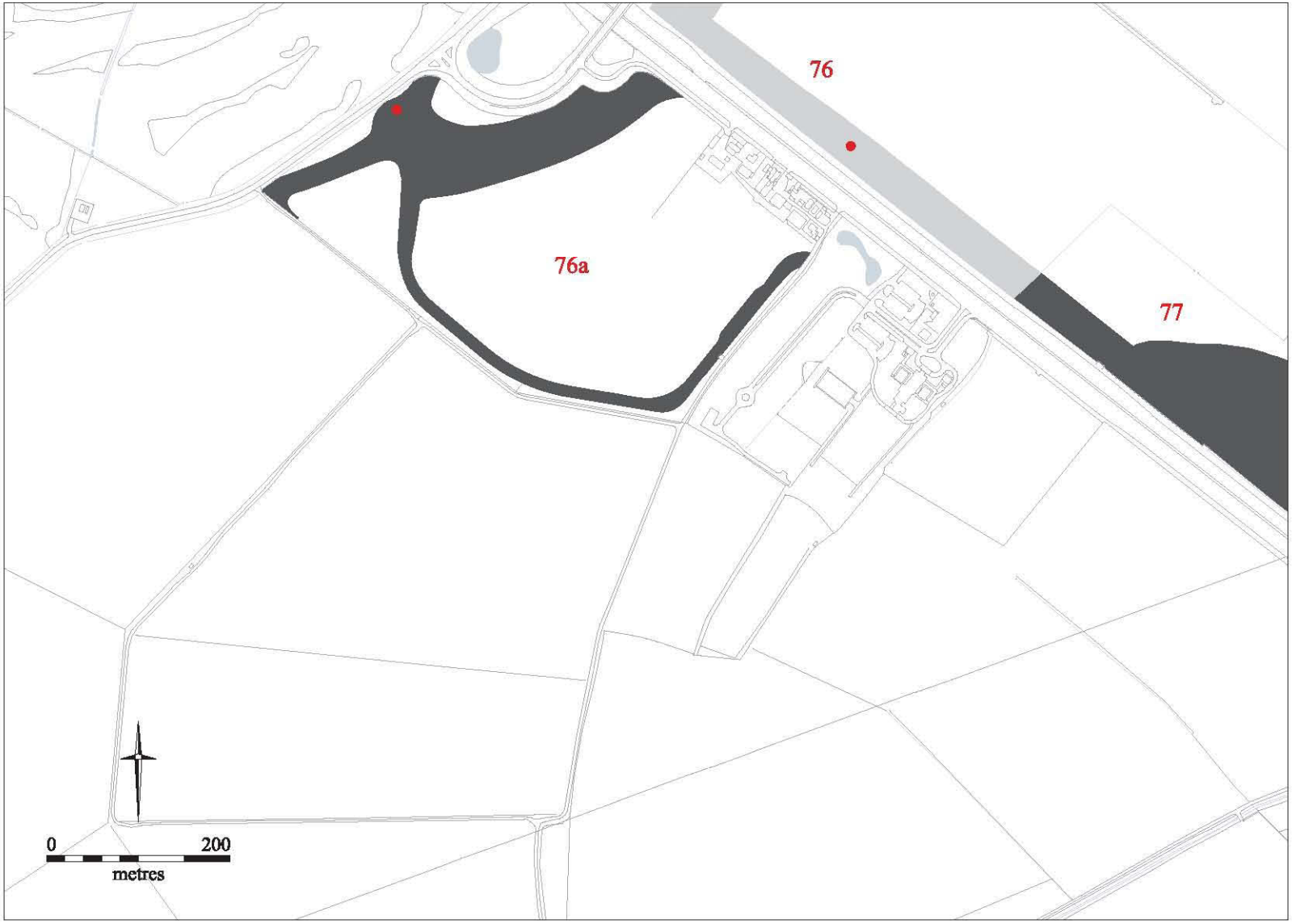


Figure 21. Phase 1 fieldwalking results and field conditions; Fields 76-77

Figure 22. Phase 1 fieldwalking results and field conditions; Fields 77-80

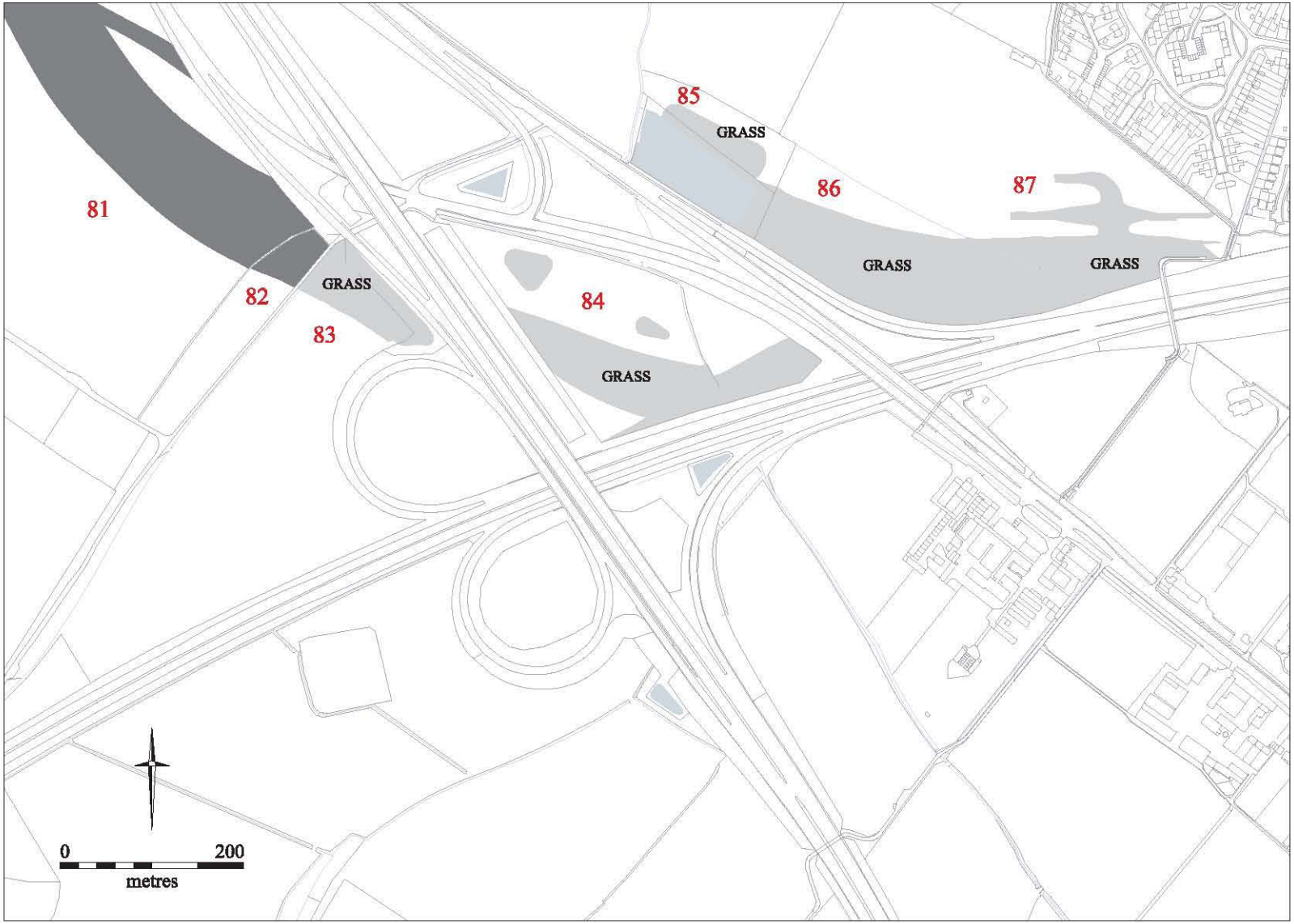


Figure 23. Phase 1 fieldwalking results and field conditions; Fields 81-87 (southern end of route)

Figure 24. Site 1 flint distribution

Figure 25. Site 1 Roman pottery distribution

Figure 26. Site 1 Saxon pottery distribution

Figure 27. Site 1 medieval pottery distribution

Figure 28. Site 1 post-medieval pottery distribution

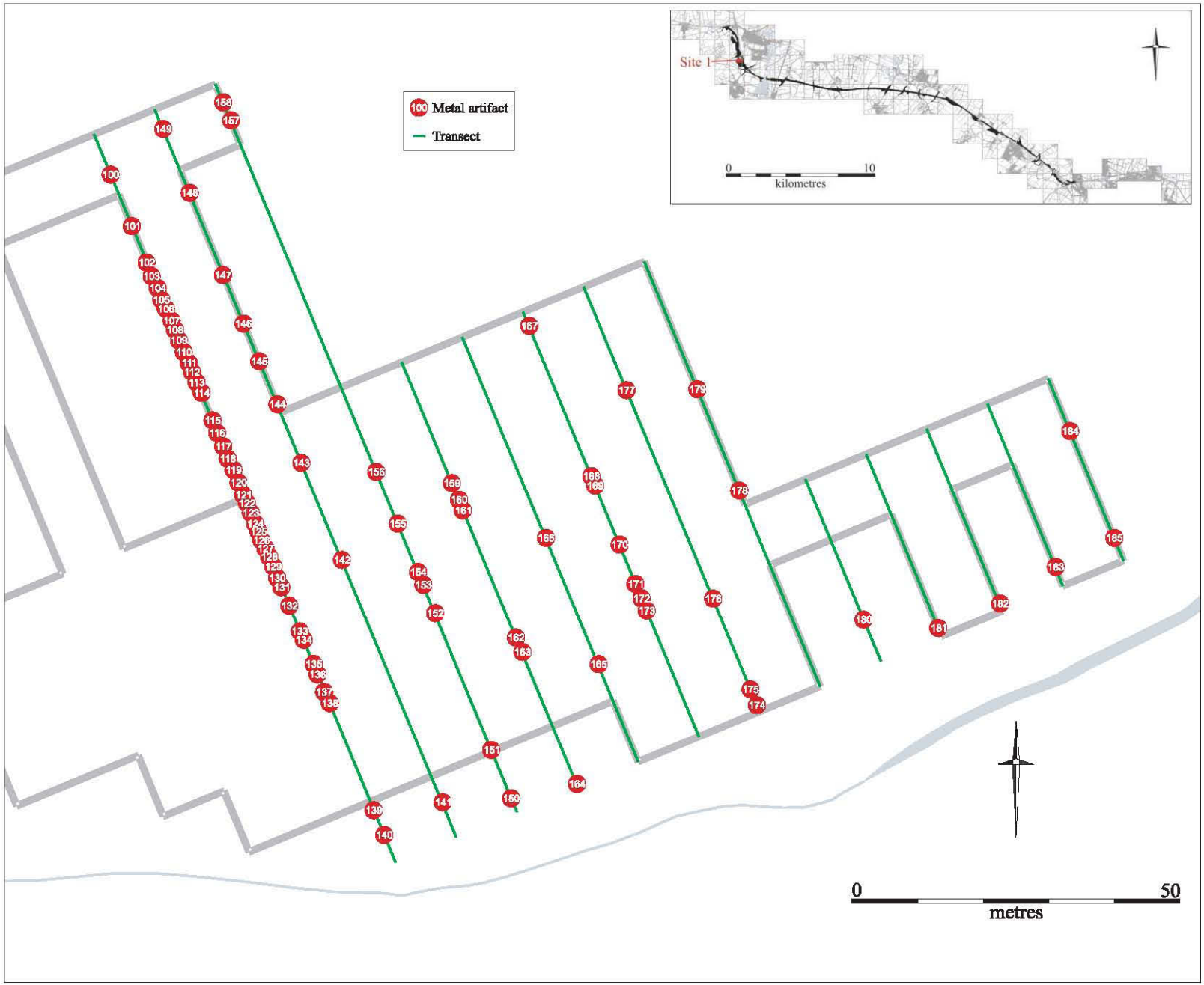


Figure 29. Site 1 metal artifact distribution

Figure 30. Site 2 flint distribution

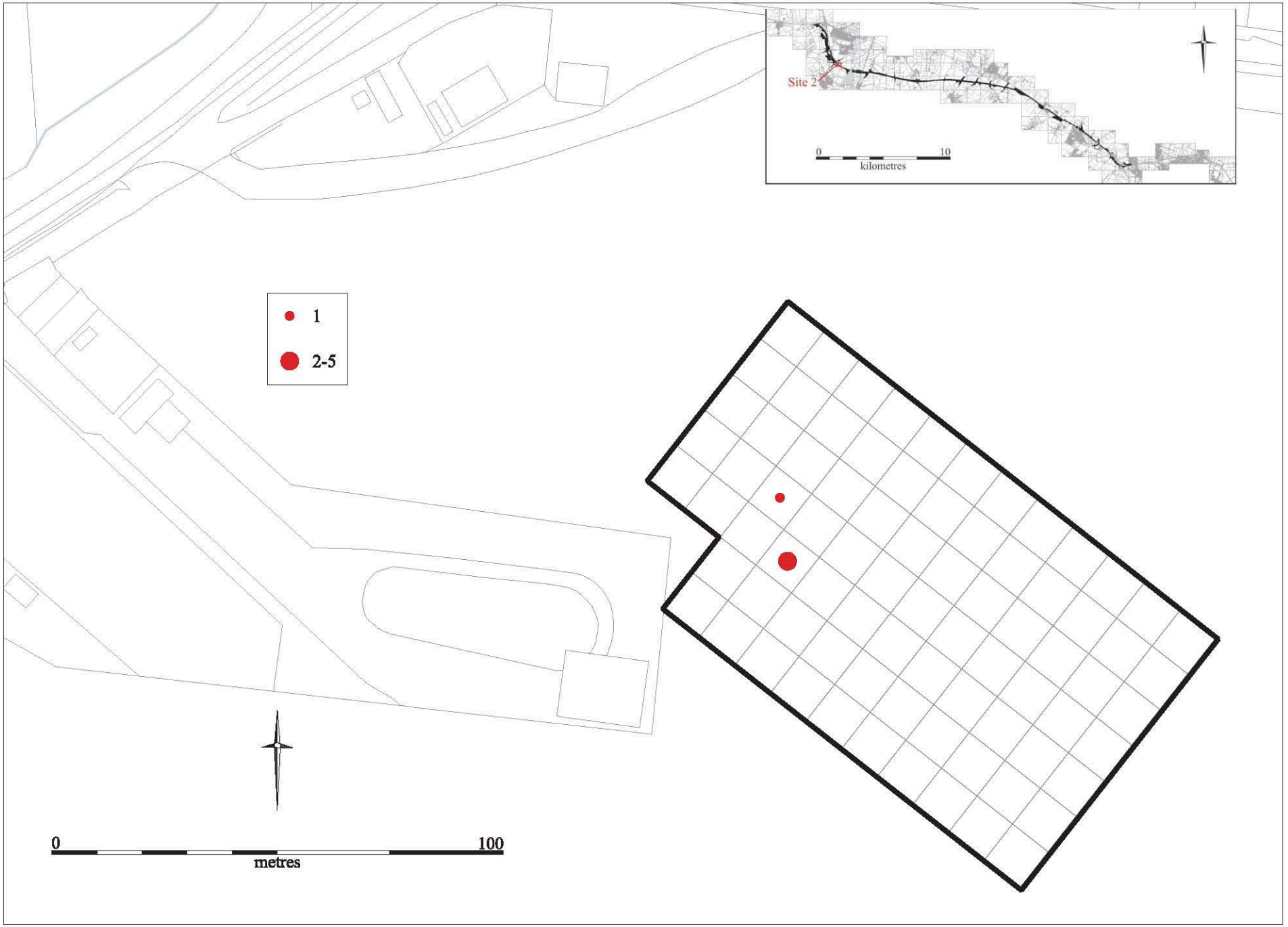


Figure 31. Site 2 Roman pottery distribution

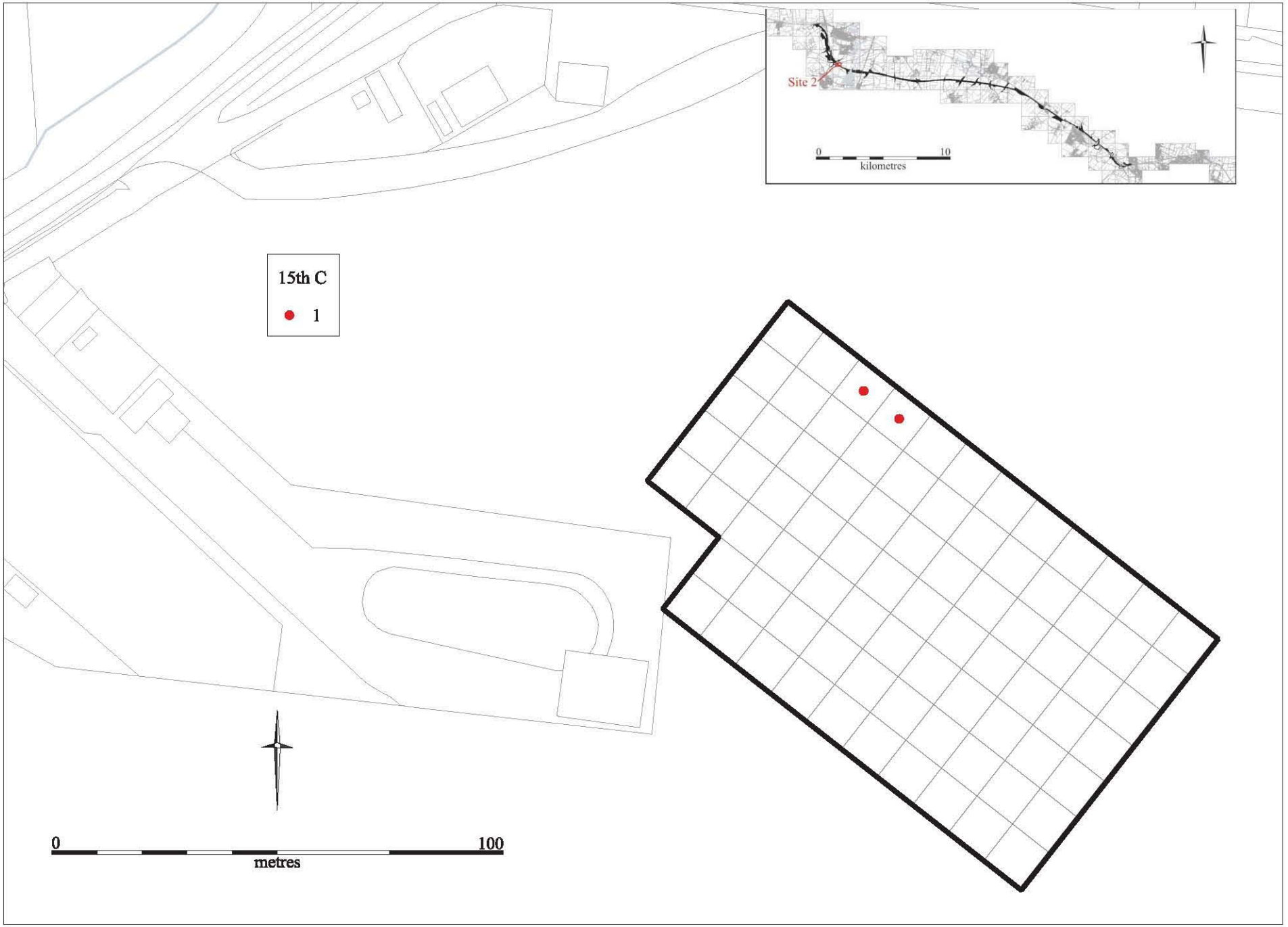


Figure 32. Site 2 medieval pottery distribution

Figure 33. Site 2 post-medieval pottery distribution

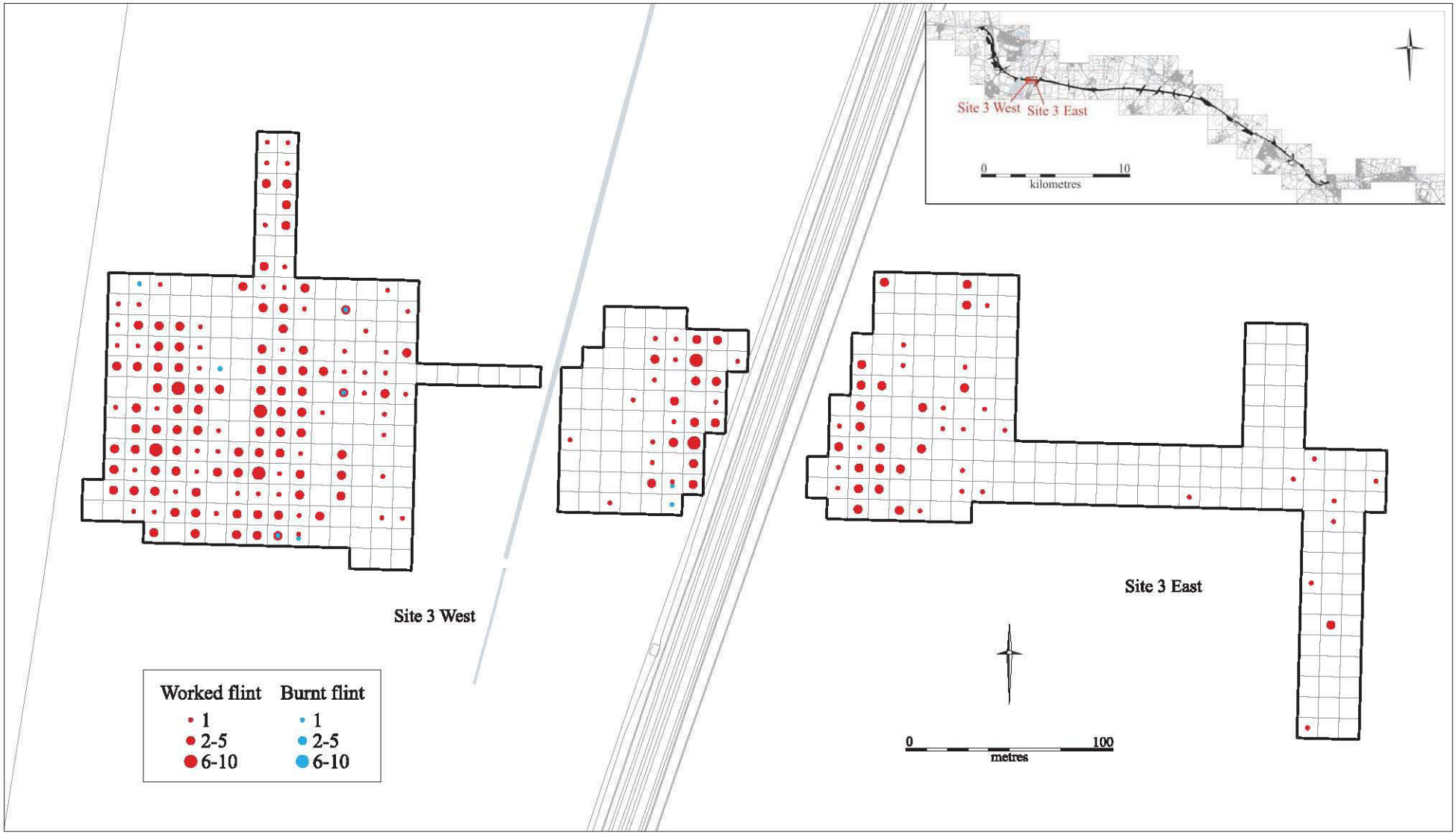


Figure 34. Site 3 flint distribution

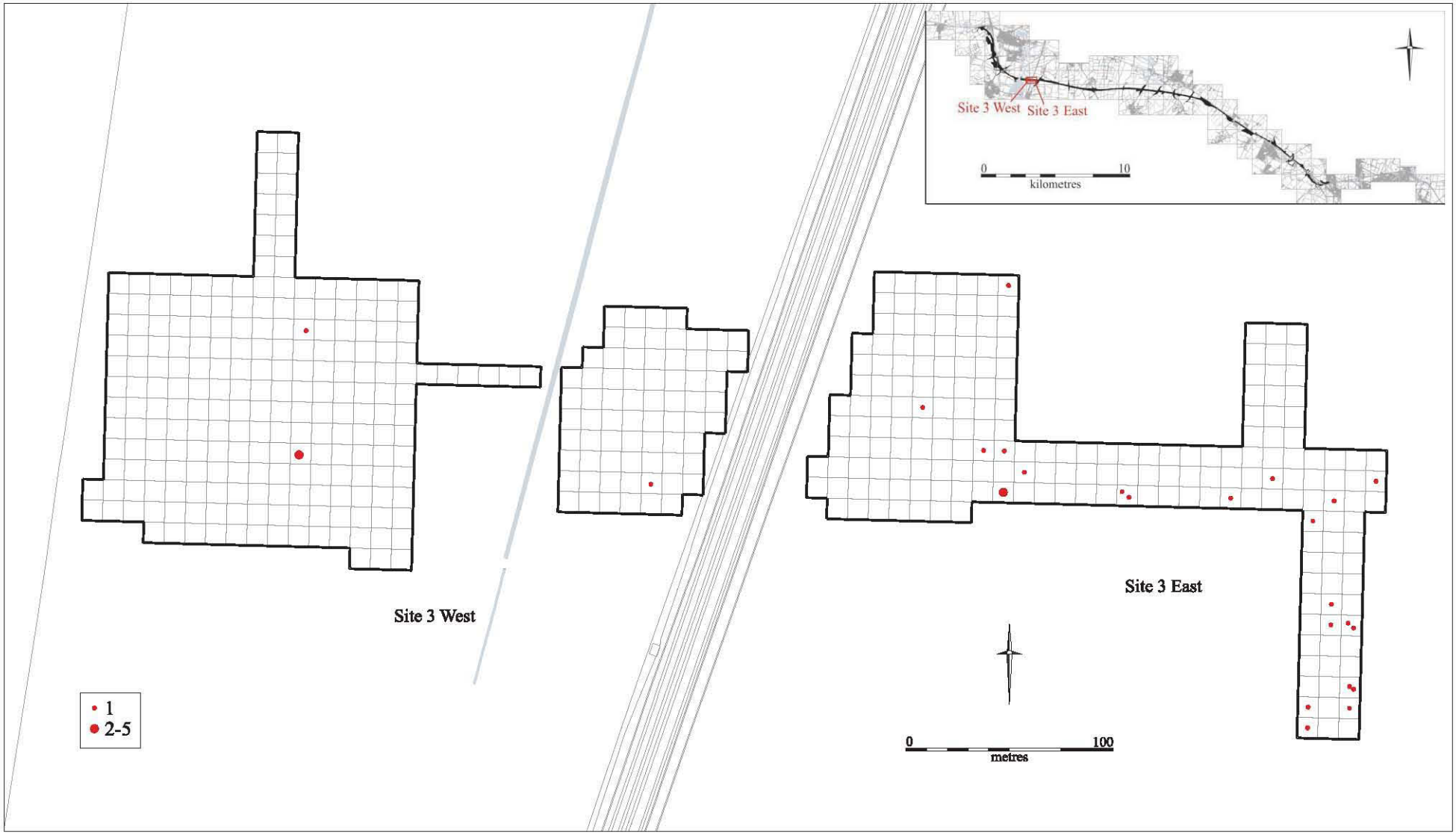


Figure 35. Site 3 Roman pottery distribution

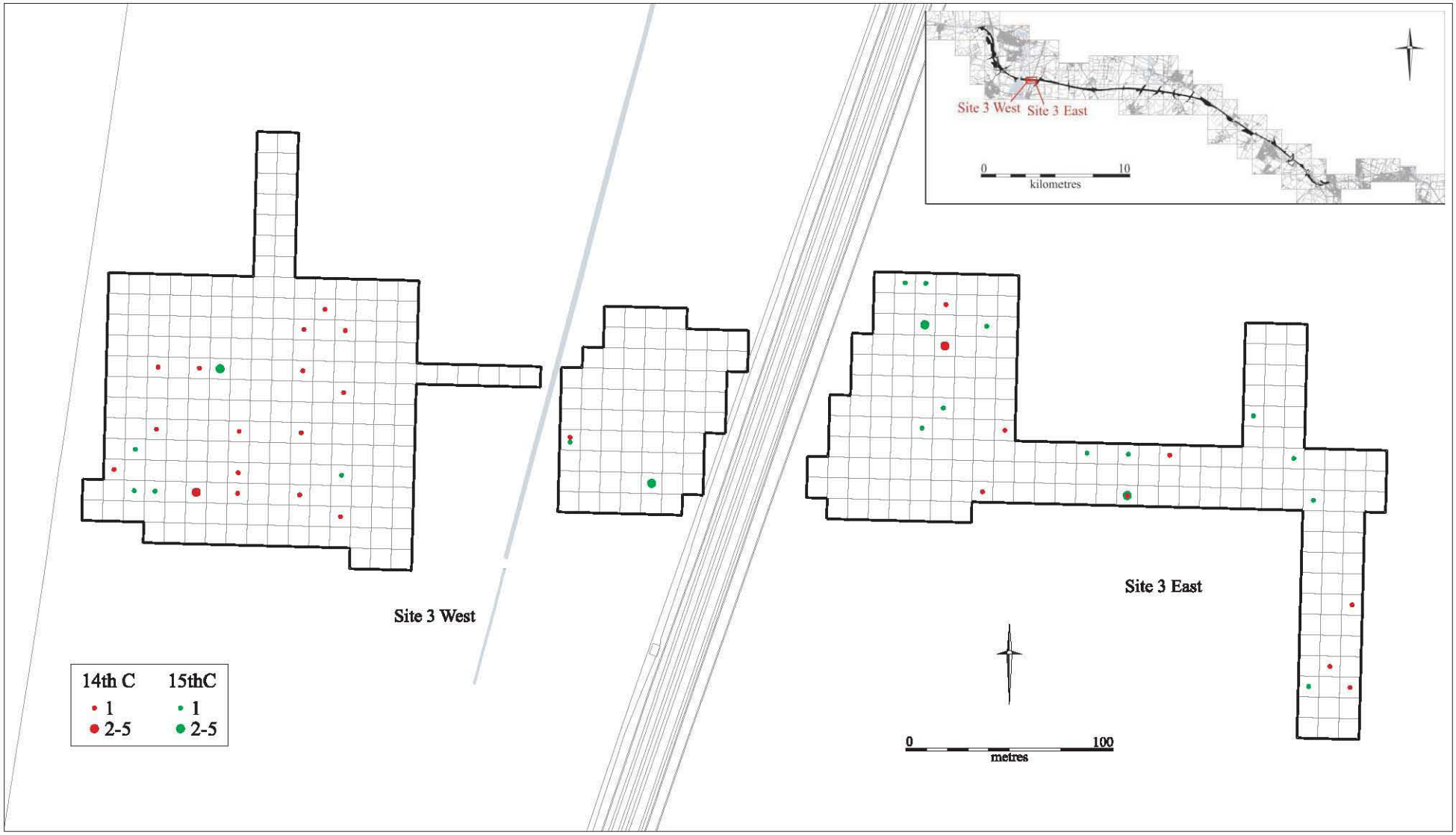


Figure 36. Site 3 medieval pottery distribution

Figure 37. Site 3 post-medieval pottery distribution

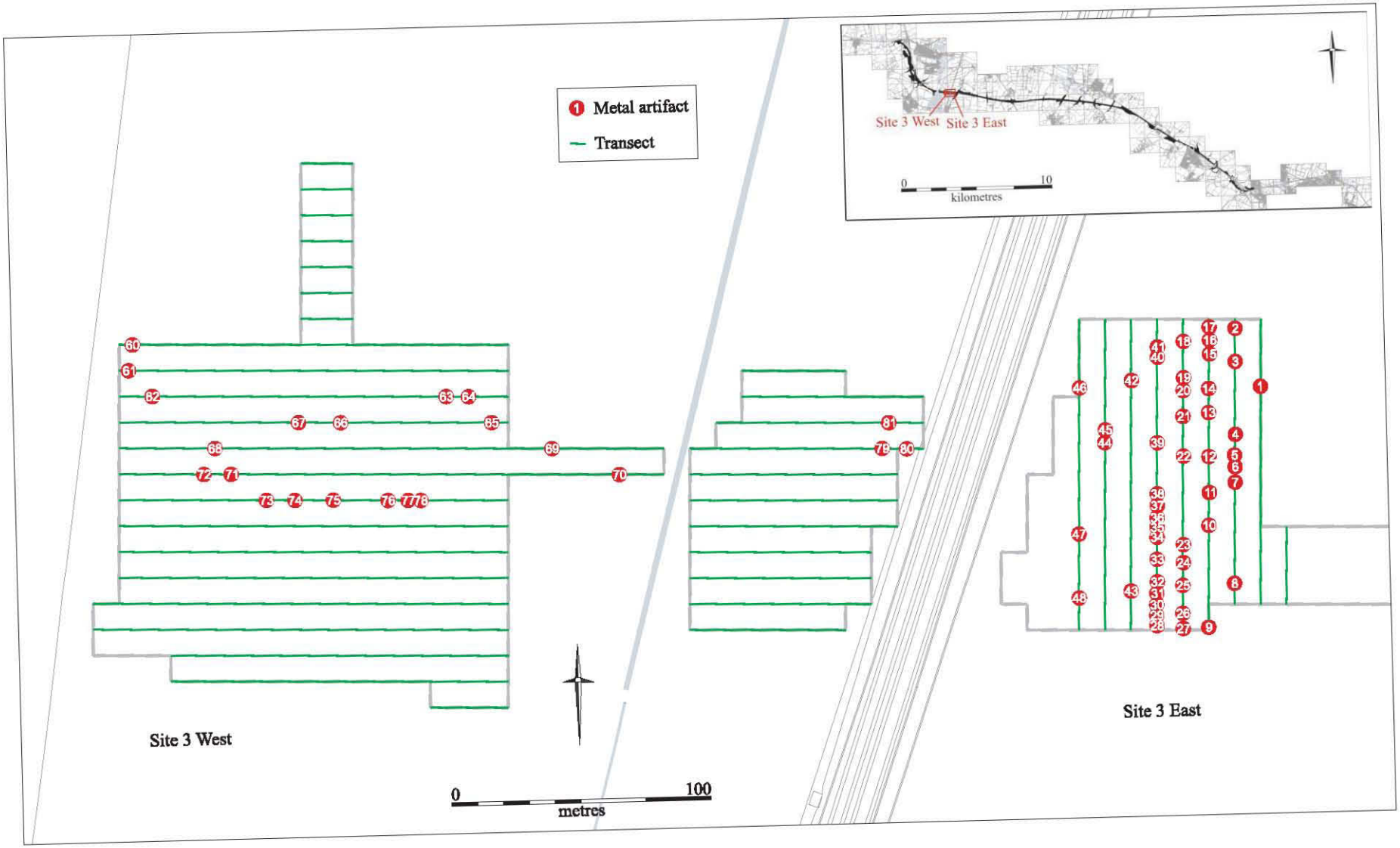


Figure 38. Site 3 metal artifact distribution

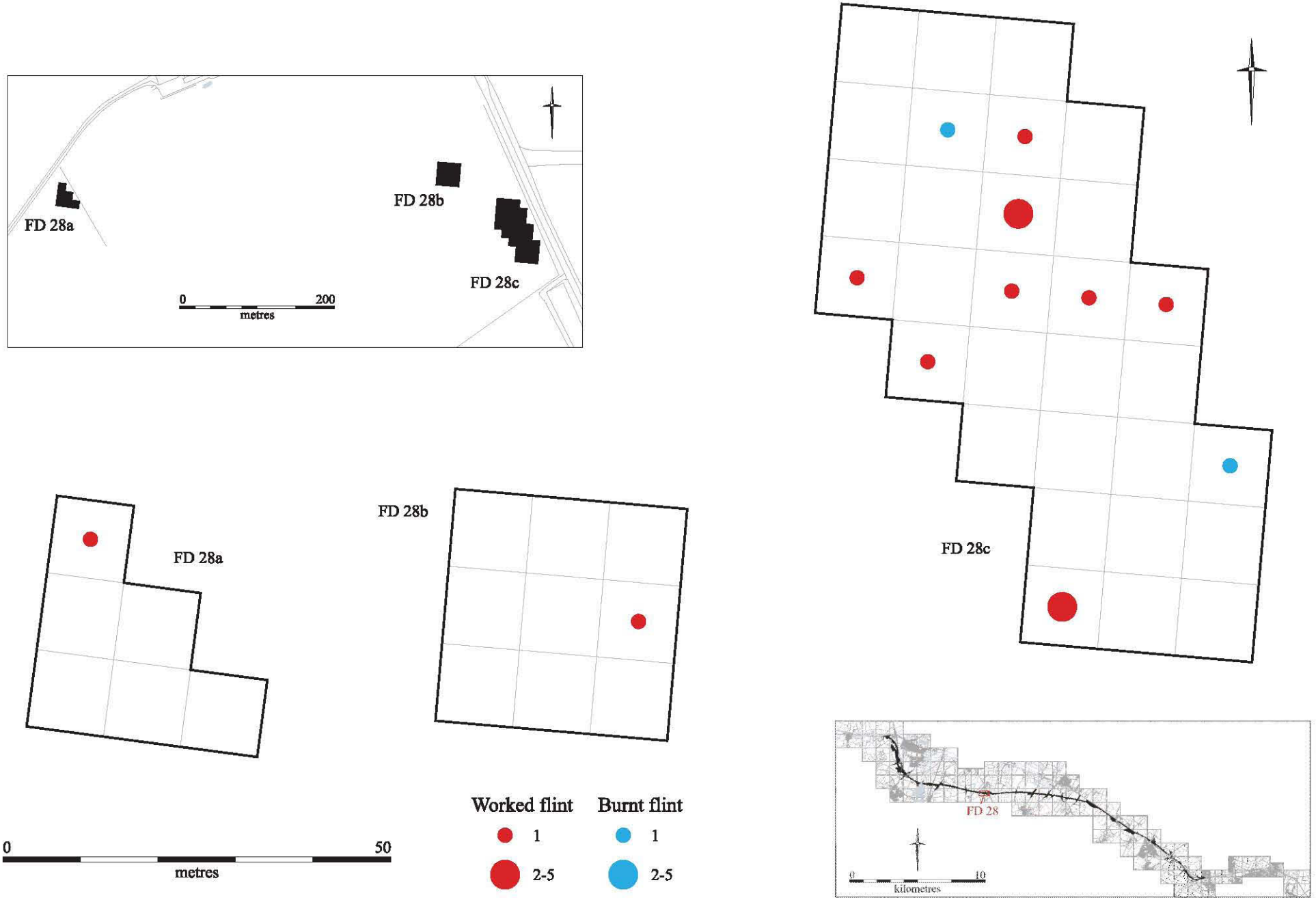


Figure 39. Field 28 flint distribution

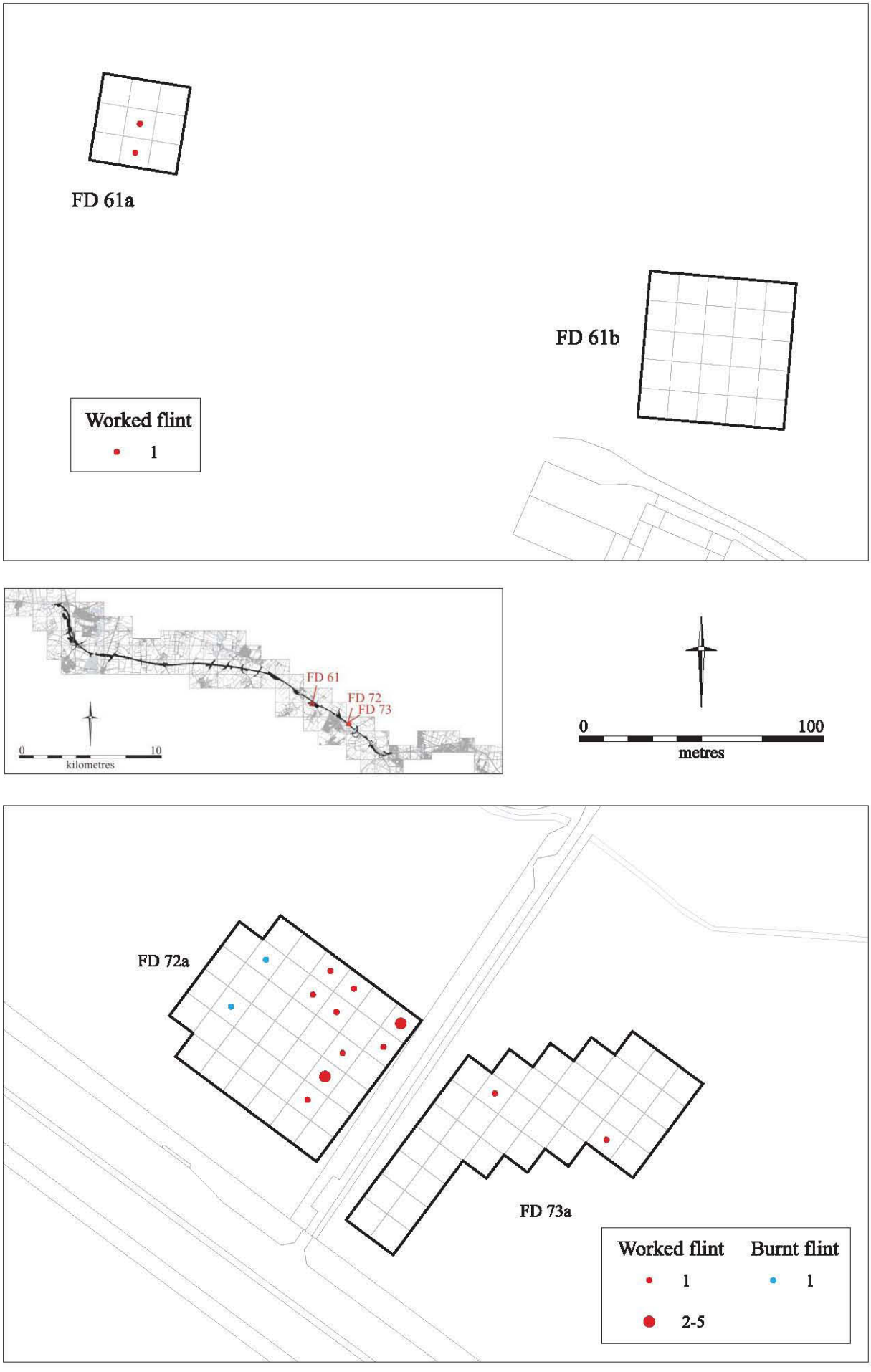
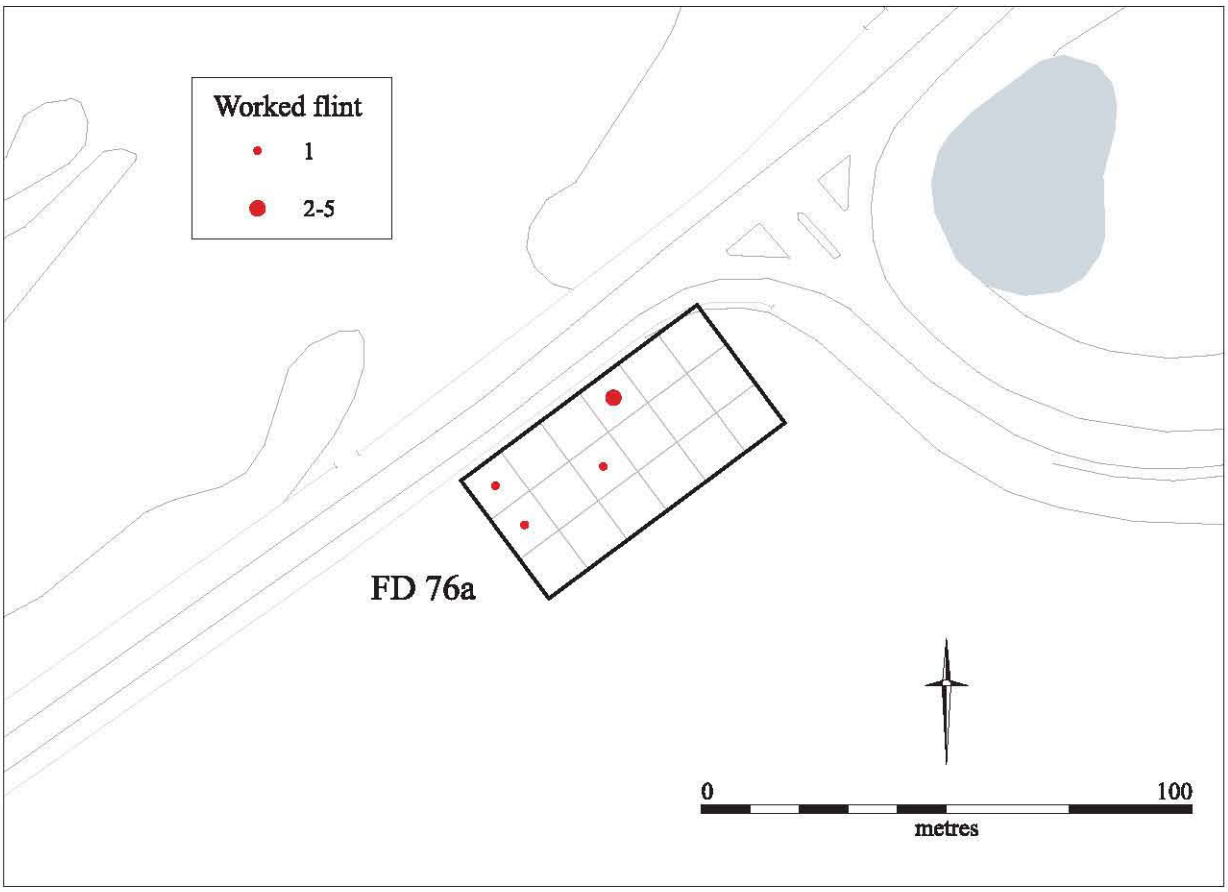


Figure 40. Fields 61, 72 and 73 flint distributions



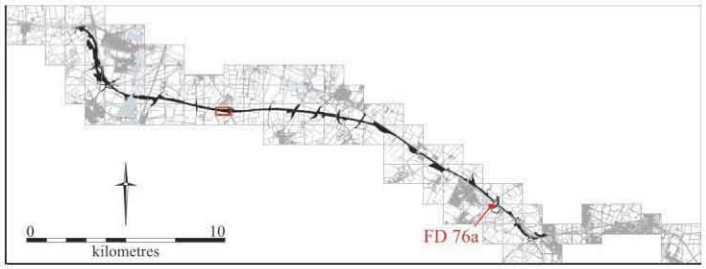


Figure 41. Field 76a flint distribution

Appendix 1 - A14 Phase 1: Fieldwalking Log (David Hall)

23rd March Bright grey morning; very wet 13.00-14.00, bright sun thereafter.

F1 Slopes to East, gravelly clay, more gravel near track entrance East from which two flints recovered.

F2. Large field next farm, low next A1, otherwise headlands of medieval agriculture. Fair visibility; winter corn; one flint 001.

F3 Geol lacustrine on E. N alluvium; all of it med. meadow, except rise of gravel at SE, seen on return.

F4 Winter corn, visibility fair-good; same lacustrine; meadow.

F5 Next farm S, same as previous soils, visibility poor.

F6 Next A1 & Brampton Hut, winter corn, fair visibility.

F7 NW next A14 on hill. W, gravelly clay, visibility good; medieval headlands, find 002 [all previous winter wheat, ground 'going over' with worm etc].

F8 & 9 extra fields for pond, not visible, long winter corn. Gravelly clay, a headland.

Afternoon, S of Brampton road.

F10 very good condition, spring drilled but weathered; best gravel at E; gravel/clay W of new road course. All med agric, furlong boundaries on course of road next to RD.
Finds 003, flints generally near RD [NW labelled GPS 003]. At SE, Saxon [finds 004] site next brook S of old gravel quarry, dark soil, sand & gravel, sherds & flints. On W return two med sherds.

F11 over brook gravelly clay, no signif. finds. Med sherds, bag labelled GPS 005.

24th March Fine sunny day, cold at start. 9.00-14.00 on fields.

F12 Winter wheat, fair only, as worm-cast developed. Gravel. A few back-ground flints – would be more; only two collected. Fg boundaries Finds.

F13 Freshly drilled and unweathered; gravelly. Red patch in depression towards S, possibly small old quarry [with burnt fill]. Furlongs. Finds 06, 07. Two dubious flints.

F14 small area only by A1; quite invisible with rape 1 foot high.

F15 Stubble at top [S], new seeds on sprayed beans from last season. Large furlong boundary out of fir trees next road goes into R&F field on E. Gravel and sand at NW going to more clayey soil elsewhere Bag 15A. A few flints collected off road line 010. Many flints, probably a site; finds 011; grid walk. Fair few flints here worth gridding.

F16 Fine R&F field with wide steepish ridges not exactly aligned parallel to present NS hedge, but the joint at the bottom is on the hedge kink. Did not walk the pasture field E which is modern grass nor old gravel works to river.

East of River.

F17 Long band of sandy gravel between the main river alluvium and a backwater. Winter corn, good visibility and weathering. Field to West, next to river, is meadow and flat apart from a little very 'unlikely' R&F running EW that once ran over all the sandy band/island.
Lot of lithics, Neo mostly, a very fine blade. Needs gridding etc.

F17A Next railway on the W of it. The sandy gravel continuing from the west of F18, under the railway. Lithics, Neo, needs gridding. Runs into waterlogged? alluvium.

F18 E of railway. Winter corn, low, fairly good. Glacial gravel. Some flints over most of it. RB grey wares, 1 piece of mortaria, RB does not go as far as railway. Sample sherds only then no more collected. Finds 012-019 but many more sherds than that; photos by KJ.

25th March Fine morning. Not too sunny, heavy rain at dinner, windy but OK in afternoon, bright sunshine.

All fields today with furlong boundaries, i.e medieval arable.
More of F18 with GPS to confirm RB. Good lithic site on low area of sand next railway. Finds 018-025.

F18a field N of F18, small area of intended bridge work. Thick winter corn on boulder clay, not visible.

F19 E of B1043. Thick corn, fair visibility only, boulder clay. One flint.

F20 Thick winter corn, poor visibility, boulder clay.

F21 Thick winter corn, poor visibility, boulder clay. One flint.

F22 boulder clay, rape, small area at top under road. No finds.

F23 Winter corn, thin, fair-good visibility, boulder clay. A few odd flints, a sample of what can stray on to clay. Finds nos 035 & 036 with med pot from NE bridge-work.

F24-26 All rape direct drilled, zero visibility. No finds [boulder clay].

27th March. Strong cold wind. Bright cloud and only a little sun at end of day, ie good visibility. Generally the winter wheat fields, as most are, not too advanced for visibility, but there is masking by worm casts being so late in the season. A few very dispersed black flints widely scattered – BA background. No RB or IA in today's whole area – woodland of long standing?

F27 Gravelly/flinty clay, good

F28 Clay with a few flints and gravel pieces. Good. A slade on NE side next Ermine Street; more flints and gravel; not quite enough to designate a 'site' or requires more work. Finds 037-041 and probably more; 12 in all some very poor [for later de-selection], 1 piece 15th red pot. Did not develop into anything on the E side of Ermine St in Fields F29.

F29 Small fields either side a slade, flinty in the hollow, but no significant finds. Two flints in slade, find 045.

F30 Rape, about 9 ins. Very poor visibility, would have found a large IA or RB side with a dark area, but nothing else. Boulder Clay [BC].

F31 Winter corn, Boulder Cay with a few pieces of gravel and flint. Poor visibility. Zero finds.

F32 Rape, poor.

F33 Winter corn. Most BC but a gravel patch in centre-north – one flint only, find 046.
Field at NE similar soil; both fair visibility.

F34 Winter corn, Boulder Cay with a few pieces of gravel and flint, rises at N. Good visibility. Boundary at S turns into a brook. Two black flints, find 047

F35 Winter corn, Boulder Cay with a few pieces of gravel and flint, slight colluvium next brook. Two black flints, finds 048-049.

F36 and west of it either side of bridge-works designate, winter corn, thick with poor visibility. Gravelly clay meadow land with colluvium. No finds.

F37 Gravelly clay meadow land with colluvium. No finds.

F38. Low corn growth, good visibility. Gravel with colluvium at S and modern flood flotsam at E. Walked very closely, no finds bar one dubious flint at W, find 050. [see note on geological bore below; very little gravel here].

30th March Bright cloudy, good conditions.

F39 Quarry at W in road area, continuing from the spinney N. Alluviated gravel, thick winter corn visibility very poor. No finds.

F40 Large. Rape at W, thin good visibility. Main winter corn thick & visibility very poor; some well weathered rough plough at east. Alluviated at W on gravel; geological bore showed very little gravel in spoil, clay under. Gravelly clay at E. Background of mostly very rough BA flints. Finds 051-059. Main CM at S not in the road area.

F41 Flat slight rise to E. Rape, pigeon-eaten, good visibility. Gravelly at W changing to gravelly clay towards E. Some colluvium at N. Background of rough BA flints. Finds 061-062 and probably 068.

F42 Flat gravelly clay, Short winter corn, good visibility. Headland at E. Finds 065-067.

31st March 2009 Warm, bright cloud then sun in afternoon

F43 BC with a little gravel. Low, eaten rape, good.

F44 R&F, low profile, could not decide whether once ploughed or naturally low [see for modern HL at outside].

F45 Grav/boulder clay but a gravelly patch at the N with several flints. Winter corn, low, with good visibility. Finds 069-073.

F46-7 grass not walked.

F 48 Bc, thick winter corn, poor. On highest part more gravelly, visibility better.

F49 Rape, long, Direct Drilled [DD] on stubble. Not visible. Walked main route and north arm, not S. Gravel.

F50 Rape, long, DD on stubble. Not visible. Walked part of W not rest. Gravel

F51 BC/Kimmeridge with a few gravels. Not visible, walked.

F52 Gravelly Kim, with more gravel at NE next road. Thick winter corn, poor.

F53 Kim with a very few gravel pieces; thick winter corn, fair.

F54 Kim with a very few gravel pieces; thick winter corn, fair.

F55 Kim with a very few gravel pieces; rape fair. Find 123.

F56 Kim with a very few gravel pieces, very rough under, rape, fair visibility.

F57 grass.

1st April Pleasant sunny, some bright cloud cover in the afternoon.

Filled in gaps at Offord Cluny, see above for fields F17 and F17A. From Trinity Foot on W side of present road.

F58 'Grounds' of Service area; grass.

F59 Gravelly Kimeridge Clay at N. Winter corn, good visibility. Flat

F60 Gravelly Kimeridge Clay at N. Winter corn, good visibility. Flat. Two pieces of rough flint.

F61 Gravelly Kimeridge Clay at NW next brook, near pure clay at S on slightly rising ground. Visibility fair.Winter corn.

F62 Gravelly Kimeridge Clay at N, near pure clay at S on rising ground. Visibility fair. A few rough BA flints & 1 med pot. Winter corn.

F63 Gravelly Kimeridge Clay at N, near pure clay at S on rising ground. Visibility fair. One rough flint, find 102. Winter corn.

6th April Warm, slight hazy cloud; visibility good.

Girton end. NE of junction. FF 85-87. Three CUF grass fields falling to the brook at NW. Access by fp bridge over A14. No clear headlands on a rapid walk. Meadow likely near brook.

F84 Centre triangle between roads, Grass, low at N, SW a bit higher with a slight bank that may be the end of medieval arable. Brook at SE and higher rising ground immediately E of it and over A604.

F83 Next both roads. Grass.

F82 SW of A604 from the Girton loops to beyond Madingley lethal road. Next A14 a narrow strip.

F81A large field of old raw [sprayed] stubble. Clear to see but ground worm casted. Slight hill in middle, clay- gravel on Kim Clay as exposed by the boreholes. More gravel at N where supposed to be a ring ditch. No finds.

F80 Over brook next Madingley road. Low, probably meadow, slightly colluviated, gravel-clay. Here a single dubious flint, find 106.

F79 N of road, another low flat meadow type field, gravel clay, winter corn good visibility, no finds.

7th April Nice day, hazy sunshine, some wind; good daylight visibility.

F64 winter corn.

F65 Gravelly clay, winter corn fair to good. A few rough flints, find 107.

F66 Gravelly clay, winter corn fair to good.

F67 Gravelly clay, winter corn, good.

F68 Grass, new seeds, not visible.

F69 Gravelly clay, long rape, not visible.

F70 Gravel, long rape, not visible; ground rises to N.

F71 Gravel, long rape, not visible.

F72 Gravel, winter corn, good visibily. Neolithic patinated blades on gravel with a little sand at the NE. Finds 110, 111 etc.

F73 Gravel, winter corn, good visibily. Flints on gravel with a little sand at the NW [next to previous]. Finds 109 and 114 etc

F74 Clay. Winter corn, fair at N, good at S. No finds.

F75 Very rough new plough, unweathered and not visible. Gravelly clay.

F76 Very rough new plough, unweathered and not visible. Gravelly clay. Find 116, a large flint with a couple of blades taken off.

F77 Corn, good, gravelly clay. One dubious flint, find 117.

F78 Corn, fair-good, gravelly clay. Very large headland running EW. No finds.

8th April. Nice sunny day with some cloud, strongish wind. Good, sun not too bright.
Filling in odds
Hacker's Fruit Farm. Met Mr. H – good old-fashioned small holder.

F76A Gravelly clay, thin winter corn, direct drilled, good visibility. A few flints, finds 118-120. Wedd's at Lolworth Cottages.

F64 Winter corn, direct drilled, fair visibility. Find 122. Clay-gravel under a little colluvium next to road and brook at S.

F64A Winter corn, direct drilled, good visibility. A few flints. Clay-gravel; a little colluvium next to dyke A14 at SW. One flint, find 121.

Shepperson at Swavesey bridge

F55A [includes the smaller adjacent field to S and next to road]. Find 124. Gravelly clay, with a little more gravel than most fields nearby, being on a slight ridge. Fair visibility; winter corn or beans, but drilled on rough ground, lately rolled.

Fields with inadequate visibility because of grass, long rape or long winter corn.
8, 9, 14, 16, west of 17, 20-21, 25-6, 30, 32, 36, 44, 46-51, 57, 58, 69-71, 83-87.

Appendix 2 – Phase 1 Transect Walk Table (David Hall)

* NF = No finds

Field no.	Field visibility grade	Flints	Roman pottery	Medieval pottery	Notes
F1(S)	3	2			BA probably
F2	3	1			1 smallish worked flint, find 001
F3	3	NF*			
F4	3	NF			
F5	2	NF			
F6	3	NF			
F7	2	1			Black flint
F8	1	NF			
F9	1	**NF**			
F10W	5			2	Two red sherds, 15th and 16th
F10NE	5	8			Rough, BA. One burnt pebble, find 003.
F10 SE	5	5		2	Flints probably BA, one blade; pottery 15th. **THREE SAXON SHERDS.** One fragment of RB tile.
F11	4	2		3	Flints very rough, BA. Pottery two 14th, one 15th.
F12	3	1			Dubious, BA.
F13	2	NF			Dubious flints [Discarded}
F14	1	NF			
F15A	3	1			Flints dubious, BA. Finds 010; off road line [Some discarded]
F15	4	8			Rough BA, one blade, plus one burnt piece. Finds 011
F16	1	NF			grass ridge and furrow
F17A	5	15		1	Blades mostly, Neo, one possible Meso patinated blade with a later notch. Pottery 15th. Plus 1 oyster shell
F17	5	9	1		Flints various; 1 RB grey sherd.
F18	4	8	16		Flints: most rough including a BA scraper plus one finely worked arrowhead piece; Roman sherds 16 include mortarium piece, most are greywares plus 3 tile pieces. Finds 012-019.
F18 bag2	4	10	6		Flints mostly rough BA, one blade. Sherds, 6 RB include a colour-coated, plus one tile fragment. Finds 018-025.
F19	3	1			small bade, cortex on one side,

Field no.	Field visibility grade	Flints	Roman pottery	Medieval pottery	Notes
					Neo.
F20	2	NF			
F21	2	1			BA?, black flint.
F22	1	NF			
F23	3	1		1	rough flints, one dubious [Discarded]. Pottery 15th greyware, finds 035-36.
F24	1	NF			
F25	1	NF			
F26	1	NF			
F27	4	NF			
F28	4	8		1	Rough flints, BA. Pottery 15th; finds 037-041 plus.
F29	4	1			BA probably, find 045 [together]
F30	2	NF			
F31	2	NF			
F32	2				
F33	3	1			damaged scraper, BA. Find 046
F34	4	1			BA, find 047.
F35	3	2			black flint, BA, finds 048-049.
F36	2	NF			
F37	3	NF			
F38	3	1			Black flint, find 050.
F39	2	NF			
F40	.2-4	3		2	Rough BA flints, 2 scrapers. Pottery two 15th, one RB. Finds 051-059 plus.
F41	4	1			Rough BA; finds 061-062and possibly 068 [Some discarded]
F42	4	1		1	flints BA probably [Some Discarded]; pottery 15th. Finds 065-67
F43	4	NF			
F44	1	NF			grass
F45	4	4			rough BA, finds 069-73.
F46	1	NF			grass
F47	1	NF			grass
F48	2	NF			
F49	1	NF			
F50	1	NF			
F51	1	NF			
F52	2	NF			
F53	3	NF			
F54	3	NF			

Field no.	Field visibility grade	Flints	Roman pottery	Medieval pottery	Notes
F55A	3	NF			dubious, rough BA. Find 123 [Discarded}
F55	3	NF			
F56	3	NF			
F57	1	NF			grass
F58	1	NF			grass
F59	4	NF			
F60	4	2			Black flint, one a blade core, Neo.
F61	3				
F62	3	2		1	one scraper, BA. Pottery 15th grey ware, finds 101-3
F63	3	NF			rough BA. Find 102. [Discarded]
F64	2	NF			rough BA. Find 102. [Discarded]
F64A	4	1			BA, find 121
F65	4	NF			Rough, BA, finds 107 [Discarded]
F66	4	NF			
F67	4	1			dubious
F68	1	NF			
F69	1	NF			
F70	1	NF			
F71	1	NF			
F72	4	4			2 blades and a blade core, Neo. Finds 110-111 etc
F73	4	NF			BA flints, finds 109, 114 [Discarded]
F74	3	NF			
F75	1	NF			
F76	1	1			One large piece of good quality black flint, with three blades struck off. Neo?. Find 116
F76A	4	1			Very rough, BA. Includes finds no 118-120 [Some Discarded]
F77	4	NF			rough, BA, find 117 [Discarded]
F78	4	NF			
F79	4	NF			
F80	3	NF			
F81	3	NF			
F82	3	NF			
F83	1	NF			
F84	1	NF			
F85	1	NF			
F86	1	NF			
F87	1	NF			

Appendix 3 - Field Quality

The fieldwalking was undertaken relatively late in the growing season, although cold spells in February and early March appeared to have inhibited crop growth to the benefit of the investigations.

Visibility Number	Area in hectares	Percentage of land take for scheme	Field numbers
Not walked	23.93	8.8%	N/A
1	69.59	25.5%	8, 9, 14, 16, 22, 24, 25, 26, 44, 46, 47, 49, 50, 51, 57, 58, 68, 69, 70, 71, 75, 76, 83, 84, 85, 86, 87
2	32.91	12.0%	5, 7, 13, 20, 21, 30, 31, 32, 36, 39, 48, 52, 64.
3	78.66	28.8%	1, 2, 3, 4, 6, 12, 15a, 19, 23, 33, 35, 37, 38, 53, 54, 55, 55a, 56, 61, 62, 63, 74, 80, 81, 82.
4	59.40	21.7%	11, 15, 18, 27, 28, 29, 34, 41, 42, 43, 45, 59, 60, 64A, 65, 66, 67, 72, 73, 76A, 77, 78, 79
5	8.79	3.2%	10, 17, 17a,

i) Of the 273 hectares of land within the road scheme between Ellington and Girton, 8.8% (23.9 hectares) was not visited by the walkers but was observed to be 'not observable' either due to pasture, oil seed rape or formerly quarried land.

ii) A further 25.5% of the land was walked, but the field surface could not be observed due to advanced growth of oil seed rape plants where spreading leaves had obscured the ploughsoil (such as fields 14, 22, 24, 25,26, 49, 50, 51) and clusters of permanent pasture (10% of scheme area) e.g. fields 16, 44,46, 47, 57, 58, 83,84, 85, 86, 87.

iii) In total, some 12% of the land (32.91 hectares) had either poor or limited visibililty (grade 2) due to advanced crop growth (rape and wheat / corn) and only occasional finds were made in these fields.

iv) The greatest number of fields 28.8% (78.66 hectares) had fair to good visibility (grade 3) with some crop growth and a variety of finds were made on these fields.

v) One fifth or 21.7% of all land had good visibility (grade 4) with limited and low crop growth in fields and a variety of finds were made on these fields.

vi) Some 3.2% of land was of very good visibility with a small amount or no crop and recent well weathered surfaces and a variety of finds were made on these fields.

vii) Once permanent pasture was removed from calculations, it was estimated that 25% of the land in the scheme area could not be viewed due to crop growth and therefore may be available for future observation.

OASIS DATA COLLECTION FORM: England

OASIS ID: cambridg3-77814

Project details

Project name	A Fieldwalking Survey of the Proposed A14 Ellington to Fen Ditton
Short description of the project	Fieldwalking was undertaken along the route of proposed improvements to the A14 road on behalf of Costain Skanska Joint Venture for the Highways Agency. The fieldwalking was divided into two phases, which aimed to first identify and then investigate potential archaeological sites along the planned route. The first phase of fieldwalking comprised a double line transect which was walked along the part of the proposed route between Ellington and Girton This work was undertaken in order to identify artefact scatters indicative of potential archaeological sites that would be examined by the second phase, a more detailed grid walking for total area collection. During the transect phase, three main areas were identified as having a higher than average number of finds that warranted further investigation as potential archaeological sites. Evidence for Mesolithic/Neolithic, Bronze Age, Roman, Saxon, and Medieval activity was recorded within three sites
Project dates	Start: 23-03-2009 End: 08-04-2009
Previous/future work	No / Yes
Any associated project reference codes	A14 09 - Sitecode
Any associated project reference codes	3079 - HER event no.
Type of project	Field evaluation
Monument type	FLINT SCATTER Late Prehistoric
Significant Finds	POT Late Prehistoric
Significant Finds	POT Roman
Significant Finds	POT Early Medieval
Significant Finds	FLINT Late Prehistoric
Methods & techniques	'Fieldwalking'
Development type	Road scheme (new and widening)
Position in the planning process	Pre-application

Project location

Country	England
Site location	CAMBRIDGESHIRE HUNTINGDONSHIRE BRAMPTON A14 Improvement Scheme
Study area	273.30 Hectares
Site coordinates	TL 541700 261270 51.9118410595 0.241675302548 51 54 42 N 000 14 30 E Line
Site coordinates	TL 518800 271900 51.9220232625 0.208873835746 51 55 19 N 000 12 31 E Line

Project creators

Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Highways Agency
Project design originator	Robin Standring
Project director/manager	Robin Standring
Project supervisor	Katie Anderson
Type of sponsor/funding body	Highways Agency

Project archives

Physical Archive recipient	Cambridge Archaeological Unit
Physical Contents	'Animal Bones','Ceramics','Worked stone/lithics'
Digital Archive recipient	Cambridge Archaeological Unit
Digital Contents	'none'

Digital Media available	'Database','Images raster / digital photography','Spreadsheets','Survey','Text'
Paper Archive recipient	Cambridge Archaeological Unit
Paper Contents	'none'
Paper Media available	'Drawing','Map','Plan','Report'

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	A Fieldwalking Survey of the Proposed A14 Ellington to Fen Ditton
Author(s)/Editor(s)	Anderson, K., Hall, D., Standring, R.
Date	2010
Issuer or publisher	Cambridge Archaeological Unit
Place of issue or publication	Cambridge

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Entered on	26 May 2010