

Thetford Southern Link Road Route Option B Phase I - Fieldwalking, Metal-detecting and Geophysical Survey



Archaeological Evaluation Report



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Thetford Southern Link Road, Route Option B

PHASE 1 - FIELDWALKING, METAL-DETECTING AND GEOPHYSICAL SURVEY

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SUMMARY

Oxford Archaeology (OA) carried out a preliminary Phase 1 non-invasive field evaluation along the preferred route (Option B) of the new Thetford Southern Link Road (Centred NGR TL 860810) on behalf of David Huskisson Associates. The non-invasive evaluation comprised fieldwalking, metal-detecting and geophysical survey within the approximate 0.8 km south eastern extent of the preferred route. In addition, an archaeological monitoring and recording action was maintained during geo-technical works undertaken along the complete 1.8 km extent of the preferred route. Extensive later disturbance, possibly associated with the development of RAF Barnham, was apparent throughout the study area, although, a low density of prehistoric worked flint was recovered and a limited number of positive anomalies, possibly representing archaeological deposits, were recorded by geophysical survey.

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 In August and November 2002 OA carried out an archaeological monitoring and recording action and a non-invasive field evaluation (Phase 1) along the preferred route (Option B) of the Thetford Southern Link Road on behalf of David Huskisson Associates. Norfolk County Council, Department of Planning and Transportation, have submitted proposals for the construction of a new southern bypass around Thetford (NGR TL 860 810). Three separate route options have been proposed (Route Options A, B and C), and in June 2001 Oxford Archaeology (OA), formerly the Oxford Archaeological Unit (OAU), was commissioned by David Huskisson Associates, on behalf of Norfolk County Council, to undertake a Stage 2 DMRB Environmental Assessment in order to assess the cultural heritage implications of each of the proposed route options (OAU 2001). This report identified that the area to be impacted by the road is one of high archaeological potential, and concluded by defining a series of strategies that could be adopted for mitigating the impact of development on the known archaeological resource.
- 1.1.2 The proposed route options, and the Stage 2 DMRB Environmental Assessment, were subject to public consultation, from which Route Option B was determined as the preferred route for the proposed scheme. On the basis of this determination, OA were further commissioned by David Huskisson Associates, on behalf of Norfolk County Council, to produce a Scoping Study for a Stage 3 Environmental Assessment for the selected preferred route Option B (OA 2002a). This document, and recommendations made by Norfolk Landscape Archaeology (NLA), archaeological advisors to Norfolk County Council, formed the basis for a proposed mitigation strategy, as documented in OA's Written Scheme of Investigation (WSI) (OA 2002b) and outlined below.
- 1.1.3 The archaeological work to be carried out along the preferred route option is to be undertaken in a series of phases, a strategy which has been agreed with by NLA. This

phased programme of works, that is to be carried out within the corridor/working width of Route Option B, is to be undertaken as defined below:

- **Phase 1** - Non-invasive fieldwalking, metal-detecting and geophysical survey along 0.8 km length of arable and grassland area at South East end of Route Option B. This work has been undertaken and is reported on in this document.
- **Phase 2** - Invasive archaeological field evaluation, based on results of Phase 1 survey, along 0.8 km length of arable and grassland area at South East end of Route Option B.
- **Phase 3** - Invasive archaeological field evaluation within coniferous area of Route Option B, to be undertaken after tree clearance.
- **(Phase 4** - Any further subsequent mitigation that may be required based on results of investigations carried out in Phases 1 to 3.)

1.1.4 The Phase 1 archaeological field investigation described in this report was undertaken in accordance with a written scheme of investigation, submitted to and agreed by NLA. The results provide a basis from which an informed decision can be made regarding the need for further archaeological works as defined in the phased strategy above.

1.2 Geology and topography

1.2.1 Route Option B is approximate 1.8 km in length and it extends through an area that comprises forested plantation, arable cultivation and grassland. The south eastern end of the proposed route also lies within a grassed area of RAF Barnham. The slopes gently down to the east towards the River Ouse, from 45 m above OD to 15 m above OD.

1.2.2 The geology is largely Cretaceous Chalk, with a localised area of Glacial Gravel in the approximate area of Thetford roundabout junction. Bury Road at the eastern end of the corridor marks the end of the Chalk and the start of the gravel and sand terrace and alluvial floodplain of the Little Ouse River.

1.3 Archaeological [and historical] background

1.3.1 A full Stage 2 DMRB Environmental Assessment of the proposed Thetford Southern Link Road was undertaken by OA in June 2001 (OAU 2001) and this document should be consulted for a more detailed account of the archaeological background of the proposal area. A brief summary of the results of this assessment for Route Option B is outlined below:

1.3.2 Earliest known sites and finds identified within the study corridor of Route Option B date to the prehistoric period. Worked flint dating to the Palaeolithic and Neolithic periods has been recovered approximately 500 m and 450 m respectively to the north and north-east of the proposed route. In addition, further undated prehistoric flints have also been recovered from sites approximately 350 m to the north of the northern end of the proposed route. Although these recorded sites will not be

impacted by the proposed development they do indicate that this area has been the focus of human activity since early Prehistory.

- 1.3.3 Occupation activity, evidenced through the funerary record, in the Bronze Age period has been identified immediately along and adjacent to Route Option B. Two cropmark ring ditches indicative of the surviving remains of Bronze Age burial mounds have been identified through aerial photographic survey taken in 1961. These are located approximately 50 m to the south of the proposed route. The full extent of this potential barrow cemetery is unknown and further burial monuments may extend into the proposal area. The find-spot of a Bronze Age Beaker recovered in c.1943 is also to be crossed by the proposed road. The presence of the beaker is also indicative of Bronze Age funerary activity in this area and it is possible that this section of the route may contain further evidence of Bronze Age burials or associated funerary structures.
- 1.3.4 Later Prehistoric occupation activity has been shown to be present within the area of the proposed route. A Late Iron Age occupation site represented by hearths, pot-boilers, animal bone, charcoal and pottery was found in a gravel pit on 'Barnham Common' approximately 450 m to the north of the proposed road. In addition, the proposed route will directly impact the line of a modern footpath that is thought to mark the alignment of the Icknield Way, a trackway of possible Prehistoric date.
- 1.3.5 Evidence of probable Roman occupation has been recorded approximately 100m to the north east of the proposed route. Three concentrations of Roman coins were recovered on Barnham Cross Common in 1991 and these may reflect the possible presence of Roman settlement in this area. Residual Roman pottery has further been recorded during fieldwalking undertaken on Barrow Hill c. 400 m to the north of the northern end of Route Option B.
- 1.3.6 Limited evidence of Medieval activity has been identified along the route of the proposed road. Two surviving extant earthwork banks have been recorded within its corridor. An east-west aligned bank that runs parallel to the county boundary is thought to mark the southern edge of Thetford Medieval Rabbit Warren. A recent site visit by OA further recorded an unknown north-south aligned earthen bank which may be contemporary with the warren. The east-west aligned bank will be directly impacted by the proposed road, together with any potential surviving below ground archaeological deposits relating to the medieval warren.
- 1.3.7 The south eastern end of Route Option B crosses the north eastern corner of the existing RAF Barnham. RAF Barnham served as a Cold War military camp and atomic and chemical weapons store in the 1950's. The weapons store closed in 1963 and is now part industrial estate and part RAF training camp. The site includes a previously secret complex with linking tracks and railway sidings. A site inspection was undertaken by OA along the proposed route and its working width and no significant structures were noted. It is possible, however, that given its former sensitive nature, below ground remains of the footings of structures associated with the 1950's military camp survive undetected.

2 EVALUATION AIMS

- 2.1.1 To evaluate the areas of arable cultivation and grassland by means of non-invasive survey in order to inform on the likely survival of archaeological deposits along the south eastern extent of the proposed route. This will enable later trenching to be more effectively targeted according to the results.
- 2.1.2 To determine, as far as possible, the location, extent, date, character, significance, quality and state of preservation of any potential archaeological sites within the study area.
- 2.1.3 To determine areas of archaeological potential within the proposal area in order to inform subsequent phases of archaeological work.
- 2.1.4 To make available the results of the investigation.

3 EVALUATION METHODOLOGY

3.1 Scope of fieldwork (Fig. 1)

- 3.1.1 The scope of the phase 1 archaeological works was to investigate the accessible arable and grassland extent of the preferred route (Fig. 1). This comprises approximately 0.8 km of its 1.8 km extent. The remaining 1 km of the route is currently inaccessible for evaluation, comprising coniferous forest, but this area will be subject to archaeological investigation after final agreement has been reached over the preferred route, and the subsequent clearance of the trees.

3.2 Fieldwork methods and recording (Fig. 2)

- 3.2.1 An integrated approach combining fieldwalking, metal-detecting and geophysical survey was undertaken within a 40 m corridor/working width along the approximate 0.8 km length of the south eastern extent of the preferred route (Fig. 2). The fieldwalking and metal-detecting survey was undertaken by OA, and the geophysical survey was carried out by the Bartlett-Clark Consultancy.

Geophysical survey by Bartlett-Clark Consultancy (Figs 3 to 5)

- 3.2.2 The geophysical survey was undertaken within a corridor located along the centre line of the proposed route (Fig. 3). The survey comprised an initial magnetometer scan followed by detailed magnetometer survey and the routine measurement of magnetic susceptibility. The geology of the route is mainly Cretaceous Chalk which usually provides reasonably favourable conditions for magnetometer surveying.
- 3.2.3 The magnetometer survey was based on readings collected along lines 1 m apart using fluxgate magnetometers, and covering a strip 21 m wide along accessible sections of the route. The results are shown as graphical and half tone plots at 1:1000 scale on Figure 5. The x-y graphical plot shows the initial data after preliminary correction for irregularities in line spacing caused by variations in the instrument zero setting. Additional 2D low pass filtering has been applied to the grey scale plots to reduce background noise levels and emphasise the broader features which may be

archaeologically significant. The grey scale plots are also reproduced at 1:2000 scale to indicate the location of the survey on Figure 3.

- 3.2.4 The magnetometer survey was supplemented by a magnetic susceptibility survey with readings taken along two transects using a Bartington MS2 meter and field sensor loop as shown on Figure 4, where results are presented as a plot of shaded squares of density proportional to the readings. Susceptibility measurements can provide a broad indication of areas in which archaeological debris, and particularly burnt material associated with past human activity, has become dispersed in the soil, but they may also be affected by other factors, including modern disturbances and landuse.
- 3.2.5 A small number of potentially significant magnetic anomalies are marked in red on the data plots on Figure 5, and the locations of these features are also indicated on the susceptibility plan (Fig. 4). The survey areas as marked on the plan were located at the required national grid co-ordinates by means of a sub-1 m accuracy differential GPS system.

Fieldwalking and metal-detecting survey (Fig. 2)

- 3.2.6 The fieldwalking and metal-detecting surveys were carried out using a systematic linear transect sampling method based on walking lines 10 m apart and collecting artefacts from units (stints) of 10 m length along each line (Fig. 2). The transects were laid out parallel to the centre line of the proposed route and comprised a total of four transects (A to D).
- 3.2.7 The fieldwalking and metal-detecting surveys were carried out in accordance with local requirements as defined in the County Standards for Field Archaeology in Norfolk (Norfolk Landscape Archaeology 1998), and recording followed procedures laid down in the *OAU Fieldwork Manual* (ed D Wilkinson, 1992).

3.3 Finds

- 3.3.1 Finds were recovered by hand during the course of the evaluation and bagged by transect and stint.

3.4 Presentation of results

- 3.4.1 In the following sections the results of each method of survey are described. There is additional comments on the finds, including finds lists in Appendices, and the reliability of the results. A discussion regarding interpretation and conclusions of the results of the non-invasive evaluation then follows.

4 RESULTS: GENERAL

4.1 Soils and ground conditions

- 4.1.1 The site is located on a sandy flint rich loam that is situated on a gentle southerly sloping topography. Field conditions for fieldwalking within the area of cultivated land were good for finds visibility, although, weather conditions were on the whole

generally overcast. Less favourable ground conditions for metal detecting and geophysical survey, comprising areas of overgrown woodland and patches of dense high grass, were encountered within RAF Barnham.

5 RESULTS: SPECIFIC

5.1 Geophysical Survey by *Bartlett-Clark Consultancy* (Figs 3 to 5)

- 5.1.1 The survey covered the full length of the route within the arable field (A) at the north of the surveyed section, with the exception of some deeply rutted ground along the southern boundary (Fig. 3). Wooded areas within RAF Barnham were not suitable for magnetometer surveying, although magnetic susceptibility readings were taken along the greater part of the proposed road alignment.
- 5.1.2 Results from the magnetometer survey show extensive magnetic disturbances of probably recent origin from all the areas investigated, but with variations in their concentration and intensity. The plots of the magnetometer readings suggest the presence of debris, probably including brick rubble and iron. The disturbances at the southern end of the route are sufficiently concentrated to obscure any archaeological features which may be present across much of areas C and D (Fig. 3). Results to the north of the RAF site are less disturbed, and the northernmost of the three areas examined (area B) may include a short section of a linear or ditch-like feature (Figs 4 and 5). This does, however, appear to coincide with a boundary indicated on the site plan. The susceptibility readings from the RAF site are low, as is usual on grassland. The lack of any strong localised variation suggests that the debris detected by the magnetometer survey is covered by clean, and possibly imported topsoil.
- 5.1.3 The magnetometer results from the arable field (A) suggest a slightly less dense spread of the kind of debris which was present in the RAF site (Fig. 3). Some parts of the field are perhaps sufficiently undisturbed for any substantial or distinct archaeological features to be identifiable, but none appears to have been detected. There are perhaps two weak linear east-west features of a kind which could relate to recent cultivation (as marked by broken red lines on the plans; Figs 4 and 5). The cropmark ring ditches which have been recorded in this field lie outside the survey. A few small magnetic anomalies which show the rounded profiles characteristic of silted pits are indicated on the plots (Figs 4 and 5). Features of this kind could be of archaeological interest, but they cannot be identified with any confidence against such a disturbed background.
- 5.1.4 Field A gave high susceptibility readings (c. 40 - 60 SI; Fig. 4). This strong response may in part be a consequence of the modern disturbances, but it could in part be natural. It would, if so, confirm that the chalk soil provides favourable conditions for the magnetic detection of archaeological features.

5.2 Fieldwalking and Metal-detecting Survey (Figs 6 to 8)

- 5.2.1 The line of the proposed route was fieldwalked in the area of arable cultivation only, but metal-detector survey was carried out along the full extent of the study area (see Fig. 2). Four transects (lettered A to D; Figs 6 to 8) were walked/surveyed, spaced at

10 m intervals with finds recovered in 10 m collection units (stints). In some places it was not possible to fully carry out the metal-detecting survey within the area of RAF Barnham due to the presence of woodland and high grass. In order to avoid discrepancy in recovery of finds by fieldworkers most object categories were recovered irrespective of the date of the material in question.

- 5.2.2 The major artefact categories collected and recorded were: pottery (post-medieval), worked flint, ceramic building material, metal objects, glass and a single fragment of clay pipe.
- 5.2.3 The criteria which separate a definitive 'concentration' of material, implying a site, and a random scatter, implying material spread during later cultivation, are difficult to define. The results, therefore, involve an element of subjectivity dependant upon the type of material in question. Worked flint, for example, survives relatively well in ploughsoil, though it can become heavily abraded. Prehistoric pottery, however, being less well fired than Roman or medieval examples, will not survive well in disturbed ploughsoils and, therefore, will appear, if at all, in very small quantities.
- 5.2.4 The low density of worked flint recovered exclusively from the arable field could not be viewed, when excluding material of dubious origin from the assemblage, as representing a distinct concentration or potential site. The recovered lithic assemblage, thought to derive solely from the topsoil, may suggest a marginal level of clustering toward the south eastern extent of the arable field.
- 5.2.5 The low density pottery assemblage recovered exclusively comprises sherds dating to the post medieval/modern period. The sherds were on the whole small, indicating that they have been present within the ploughsoil for sometime, and when plotted showed no clear evidence of concentrations.
- 5.2.6 The metal-detecting survey recovered a small artefact assemblage, all of which was derived from the arable field at the north western end of the study area. The material recovered was fragmentary and on the whole diagnostically undateable. The assemblage when plotted showed no apparent concentrations and it is thought likely to represent the by-product of later post-medieval/modern disturbance or manuring.

5.3 Archaeological Monitoring and Recording (Figs 9 and 10)

- 5.3.1 In August 2002 OA undertook an archaeological monitoring and recording action during the course of geo-technical works along the full 1.8 km extent of the preferred route (Option B; Fig. 9). A total of nine trial pits were monitored (1 to 9) from a final total of 12 pits excavated. The trial pits, with the exception of Trial pit 2 which was required to be augered due to machine access difficulties, measured approximately 2.5 m long by 0.5 m wide and reached an average depth of 3.30 m.
- 5.3.2 In most instances, the trial pits revealed a layer of topsoil and subsoil to a depth of approximately 0.50 m which overlay a variable natural geology comprising orange brown sand and gravels and brown sandy chalk and gravels (glacial till)(Fig. 10). The underlying bedrock at depth comprised undisturbed chalk. A single trial pit, Trial pit 1, situated along the embankment of the present A11, revealed the presence of a buried topsoil horizon, this is however, associated with its later embankment.

5.3.3 No archaeological features/deposits or finds were observed or recovered during the course of the works.

5.4 Finds

Pottery by Edward Biddulph (Appendix 1; Table 1)

5.4.1 A total of 19 sherds of pottery were recovered from fieldwalking Transects A to D (Appendix 1; Table 1). No more than a single sherd was present in each pottery yielding bag and these were predominantly represented by small, but relatively unabraded, sherds. A few larger pieces were present within the assemblage, these being recovered exclusively from Transects B and C.

5.4.2 The recovered pottery assemblage dates from between the seventeenth and nineteenth centuries and is dominated by the presence of glazed red earthen ware.

Lithics by Kate Cramp (Appendix 2; Table 2)

5.4.3 A total of 12 struck flints were recovered from fieldwalking Transects A to D (Appendix 2; Table 2). Although a small number of pieces were recorded as fresh, most exhibit heavy modern edge-damage consistent with a plough-soil derivation. A few pieces are lightly rolled and glossed. The degree of cortication is variable, with a cortication that ranges from light to heavy visible on six flints; the remaining six pieces are uncorticated. Both pieces of irregular waste are broken.

5.4.4 The assemblage is composed entirely of debitage, the majority of which is technologically undiagnostic. The platform edge rejuvenation flake from Transect A (1260-1270) can be broadly dated to the Mesolithic or Neolithic on technological grounds.

Metalwork by Leigh Allen (Appendix 3; Table 3)

5.4.5 A total of seven metal objects were recovered from metal-detecting survey, comprising six iron and one lead, from Transects A to C (Appendix 3; Table 3). The iron assemblage includes the remains of two rectangular buckle frames, a collar, a nail and two strips, none of which are diagnostically dateable. The single lead object recovered is a fragment of misshapen lead sheet of probable post-medieval/modern date.

Other finds by Leigh Allen (Appendix 4; Table 4)

5.4.6 The fieldwalking survey also recovered a large quantity of ceramic building material (CBM), 11 fragments of glass and a single fragment of clay pipe stem (Appendix 4; Table 4).

5.4.7 A total of 2540g of ceramic building material was recovered. The majority of the assemblage comprises small well worn fragments of tile with no measurable dimensions thickness. There are a few larger fragments but they bear no distinguishing marks. The assemblage is post-medieval/modern in date.

- 5.4.8 The small assemblage of recovered glass is all derived from vessels, many of which represent green or brown bottles. The assemblage is again post-medieval/modern in date.

6 DISCUSSION AND INTERPRETATION

6.1 Reliability of field investigation

- 6.1.1 The results of the field investigations must be viewed in direct correlation to the limitations of identifying subtle concentrations of material, potentially representing previous occupation activity on the site, within the narrow corridor that formed the focus of the sample area. Additional restriction of which was further encountered due to the presence of dense woodland and high grass, especially within RAF Barnham.
- 6.1.2 Interpretation of the routes archaeological potential is further limited by the general paucity of finds recovered during the field investigation. The low density of artefactual material recovered, which is predominantly post medieval/modern in date, may directly relate to the high level of later modern disturbance that appears to have occurred along the route, indicated by the results of the geophysical survey, or to reflect a genuine lack of archaeological activity/remains within the development area.

6.2 Overall interpretation

- 6.2.1 The artefact assemblage recovered within the study area during fieldwalking and metal-detecting is predominantly post medieval/modern in date, with the exception of a low level background scatter of prehistoric flint recorded within the arable field. The presence of this material is indicative of activity occurring within the general environs of the site dating from early prehistory, evidence for which is known from the presence of surviving cropmark funerary deposits of probable Bronze Age date immediately to the south of the study area.
- 6.2.2 No material evidence of Roman or medieval occupation/activity within the study area, potential for which was suggested in the Stage 2 DMRB Environmental Assessment (OAU 2001), was shown to be present. No pottery evidence, other than that dating to the post medieval/modern period was recovered and this material, in conjunction with similarly dated modest quantities of CBM and low levels of glass and metal work, suggest that the study corridor has either been subject to extensive later disturbance/dumping, or that the presence of much of the recovered materials, especially within the arable field, are the product of agricultural manuring.
- 6.2.3 The results of the geophysical survey indicate that the study area, especially that located within RAF Barnham, has been subject to extensive later disturbance. This later disturbance may in part have removed/destroyed any potential surviving archaeological deposits, although, equally, any sufficient depth of made ground may serve to mask and preserve possible surviving below ground archaeological remains. Geophysical survey and the archaeological monitoring and recording results of Trial pits 8 and 9, suggest the presence of less extensive disturbance within the area of the arable field. The full extent of the impact of any below ground disturbance within

RAF Barnham is still presently unknown, although, ground level reduction of up to c. 0.50 m was noted during the field investigation at the south eastern extent of the route (Fig. 2).

- 6.2.4 Although extensive later disturbance of the study corridor is indicated by the geophysical survey, conditions for prospection were generally favourable and a low level of positive anomalies of uncertain significance/date, indicative of the potential presence of possible pits and linear features, were recorded.
- 6.2.5 Archaeological monitoring of geo-technical trial pits along much of the full extent of the development corridor has provided no further significant observations.

Significance

- 6.2.6 Taking into account the limitations of non-intrusive survey of this type the results appear to indicate low potential for archaeological remains within the study area, particularly for the Roman and medieval periods, with extensive later post medieval/modern disturbance.
- 6.2.7 Potential does remain, however, for later prehistoric/Saxon remains, where low levels of artefacts might in any case be expected. Only further intrusive survey would clarify this and the nature/date of the recorded geophysical anomalies, and the potential for archaeological survival beneath any made ground in the vicinity of the airbase.

APPENDICES

APPENDIX 1 POTTERY

Transect	Type	Date
A		
1130-1140	Blue transfer/pearlware	18th/19th cent
1190-1200	Glazed red earthenware	17th-19th cent
B		
1110-1120	Glazed red earthenware	17th-19th cent
1130-1140	Glazed red earthenware	17th-19th cent
1220-1230	Glazed red earthenware	17th-19th cent
1250-1260	Earthenware	18th/19th cent
1270-1280	Glazed red earthenware	17th-19th cent
1090-1100	Glazed red earthenware	17th-19th cent
1170-1180	Glazed red earthenware	17th-19th cent
1120-1130	Glazed coarse white ware	18th/19th cent
C		
1170-1080	Glazed red earthenware	17th-19th cent
1240-1250	Glazed red earthenware	17th-19th cent
1250-1260	Glazed red earthenware	17th-19th cent
1290-1100	Glazed white ware	18th/19th cent
1100-1110	Glazed red earthenware	17th-19th cent
D		
1130-1140	Glazed red earthenware	17th-19th cent
1250-1260	Glazed red earthenware	17th-19th cent
1120-1130	Glazed red earthenware	17th-19th cent
1270-1240	Glazed white ware	18th/19th cent

Table 2: Pottery by type and by transect.

APPENDIX 2 WORKED FLINT

Category:	A					B		C	D			Total:
	1180-1190	1200-1210	1230-1240	1260-1270	1270-1280	1140-1150	1190-1200	1150-1160	1080-1090	1100-1110	1260-1270	
Flake	1		1		1	1	1	1	1	1		8
Blade-like flake		1										1
Core edge rejuvenation flake				1								1
Irregular waste					1						1	2
Total:	1	1	1	1	2	1	1	1	1	1	1	12

Table 2: Flint by type and by transect.

APPENDIX 3 METALWORK

Transect	Type	Date
A		
1120-1130	Fe - object?/strip	Undated
1150-1160	Fe - nail/holdfast	Undated
1170-1180	Fe - buckle frame	Undated
1170-1180	Fe - collar	Undated
B		
1060-1070	Fe - strip	Undated
C		
1200-1210	Fe - buckle fragment	Undated
1260-1270	Pb - misshapen sheet	Undated

Table 3: Metalwork by type and by transect.

APPENDIX 4 OTHER FINDS

The assemblage is post-medieval/modern in date. The number and weight of the fragments are recorded in the table below. D in the description column denotes a fragment of plain flat tile with no distinguishing marks, misc. are small abraded fragments with no measurable dimensions.

Table 4: Other finds by type and by transect.

Transect	Material	No.	Desc	Weight (g)
A				
1070-1080	CBM	2	misc	39
1080-1090	CBM	1	D	27
1090-1100	CBM	2	D + misc	30
1100-1110	CBM	2	2 x D	31
1110-1120	CBM	2	misc	19
1120-1130	CBM	1	D	48
1130-1140	CBM	1	misc	11
1150-1160	CBM	1	D	12
1160-1170	CBM	2	misc	12
1180-1190	CBM	1	D	75
1190-1200	CBM	1	D	34
1200-1210	CBM	1	D	18
1220-1230	CBM	1	D	17
1230-1240	CBM	1	misc	96
1250-1260	CBM	1	misc	8
1240-1250	Glass	1	Clear Vessel	-
B				
1040-1050	CBM	3	2 x D, 1 x misc	48
1060-1070	CBM	1	misc	12
1070-1080	CBM	5	2 x D, 3 x misc	96
1080-1090	CBM	1	misc	37
1100-1110	CBM	3	misc	20
1110-1120	CBM	4	1 x D, 3 x misc	72

1120-1130	CBM	3	1 x D, 2 x misc	59
1120-1130	CBM	1	D glazed	30
1140-1150	CBM	2	D	50
1150-1160	CBM	4	1 x D, 3 x misc	21
1160-1170	CBM	2	D	17
1180-1190	CBM	1	misc	12
1190-1200	CBM	2	misc	11
1200-1210	CBM	2	1 x D, 1 x misc	12
1210-1220	CBM	1	D	106
1220-1230	CBM	5	misc	44
1260-1270	CBM	2	1 x D, 1 x misc	65
1270-1280	CBM	5	1 x D, 4 x misc	106
1120-1130	Glass	1	Bottle rim	12
1270-1280	Glass	1	Bottle glass	3
C				
1060-1070	CBM	2	1 x D, 1 x misc	17
1070-1080	CBM	2	1 x D, 1 x misc	54
1080-1090	CBM	4	1 x D, 3 x misc	78
1090-1100	CBM	4	1 x D, 3 x misc	55
1100-1110	CBM	4	D	75
1110-1120	CBM	2	1 x D, 1 x misc	16
1120-1130	CBM	2	misc	10
1130-1140	CBM	1	D	19
1140-1150	CBM	6	1 x D, 5 x misc	69
1160-1170	CBM	4	1 x D, 3 x misc	42
1170-1180	CBM	3	2 x D, 1 x misc	17
1180-1190	CBM	3	1 x D, 2 x misc	43
1190-1200	CBM	1	D	14
1200-1210	CBM	2	misc	4
1220-1230	CBM	4	2 x D, 2 x misc	40
1230-1240	CBM	5	3 x D, 2 x misc	90
1240-1250	CBM	4	1 x D, 3 x misc	99
1250-1260	CBM	1	misc	29
1260-1270	CBM	2	misc	6
1270-1280	CBM	4	1 x D, 3 x misc	73
1070-1080	Glass	1	Vessel frag	6
1110-1120	Glass	1	Bottle frag	7
1200-1210	Glass	1	Vessel frag	1
1220-1230	Glass	1	Vessel frag	9
1170-1180	Clay Pipe	1	Stem frag	3
D				
1060-1070	CBM	2	2 x D	120

1070-1080	CBM	1	misc	13
1080-1090	CBM	2	2 x D	52
1100-1110	CBM	1	misc	10
1140-1150	CBM	2	D + misc	23
1160-1170	CBM	1	D	17
1170-1180	CBM	1	D	11
1180-1190	CBM	1	misc	59
1190-1200	CBM	1	D	24
1200-1210	CBM	1	misc	4
1220-1230	CBM	3	D + 2 x misc	44
1240-1250	CBM	1	misc	18
1080-1090	Glass	1	Vessel frag	21
1100-1110	Glass	1	Vessel frag	4
1110-1120	Glass	1	Vessel frag	10
1150-1160	Glass	1	Bottle frag	64

APPENDIX 5 BIBLIOGRAPHY AND REFERENCES

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OA 2002a, Thetford Southern Bypass: Scoping Study, *Stage 3 DMRB Environmental Assessment (Cultural Heritage)*, Oxford Archaeology

OA 2002b, Thetford Southern Link Road, Option B, Phase 1 Fieldwalking, Metal-detecting and Geophysical Survey, *Written Scheme of Investigation*, Oxford Archaeology

Norfolk Landscape Archaeology 1998, *County Standards for Field Archaeology in Norfolk*, Norfolk Museums and Archaeology Service

APPENDIX 6 SUMMARY OF SITE DETAILS

Site name: Thetford Southern Link Road, Route Option B

Site code: 37325 THD

Grid reference: Centred NGR TL 860 810

Type of evaluation: Fieldwalking, Metal-detecting and Geophysical Survey (including archaeological monitoring and recording action during geotechnical trial pitting)

Date and duration of project: 7th November to 20th November 2002

Area of site: approximately 0.8 km

Summary of results: Oxford Archaeology (OA) carried out a preliminary Phase 1 non-invasive field evaluation along the preferred route (Option B) of the new Thetford Southern Link Road (Centred NGR TL 860810) on behalf of David Huskisson Associates. The non-invasive evaluation comprised fieldwalking, metal-detecting and geophysical survey within the approximate 0.8 km south eastern extent of the preferred route. In addition, an archaeological monitoring and recording action was maintained during geo-technical works undertaken along the complete 1.8 km extent of the preferred route. Extensive later disturbance, possibly associated with the development of RAF Barnham, was apparent throughout the study area, although, a low density of prehistoric worked flint was recovered and a limited number of positive anomalies, possibly representing archaeological deposits, were recorded by geophysical survey

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with the Norfolk Museum Service in due course, under the following accession number: 37325 THD

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Figure 1: Site location of Phase 1 Non-invasive study area



Figure 2: Phase 1 Non-invasive study area showing sampling and survey methodology

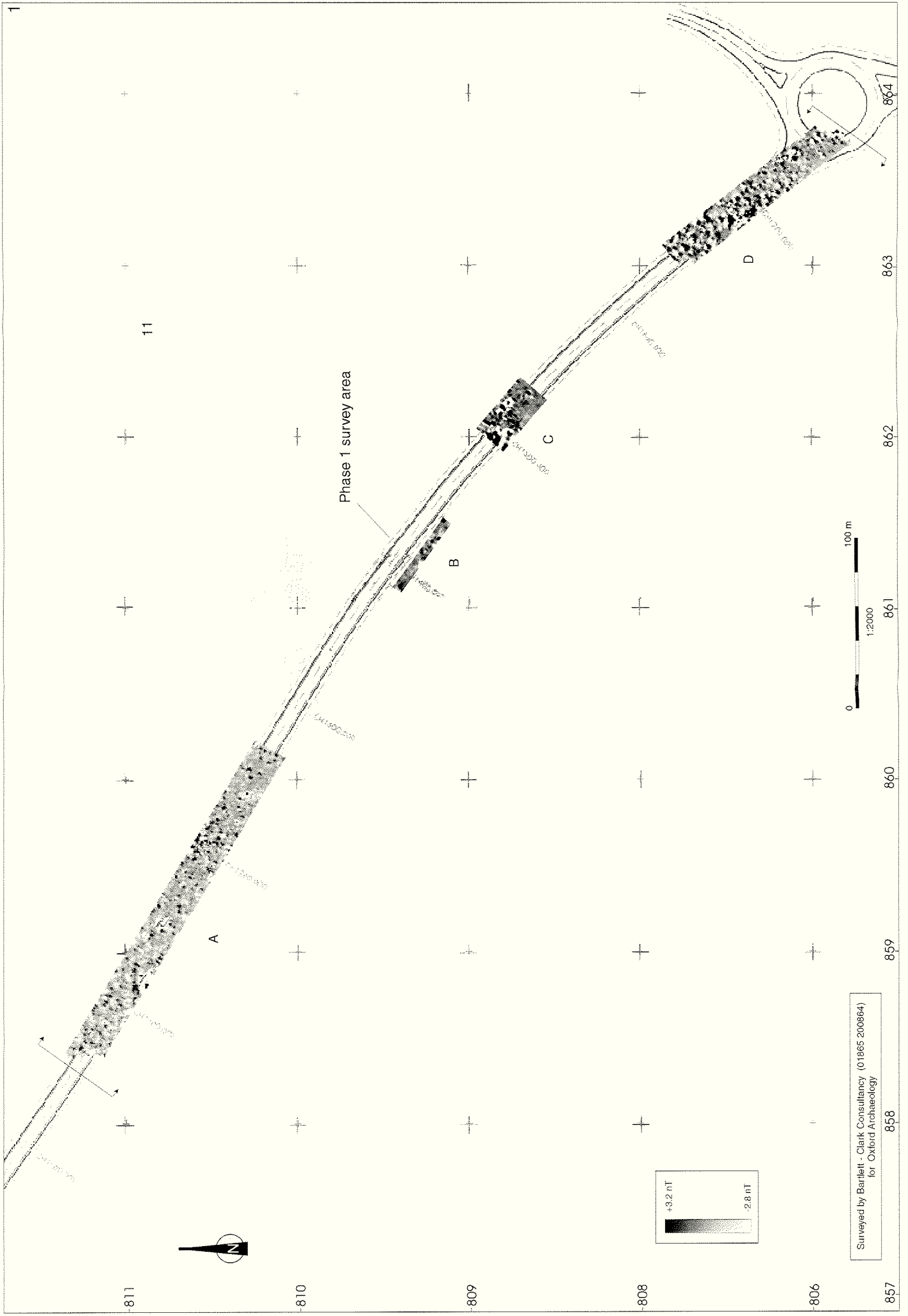


Figure 3: Location of magnetometer survey

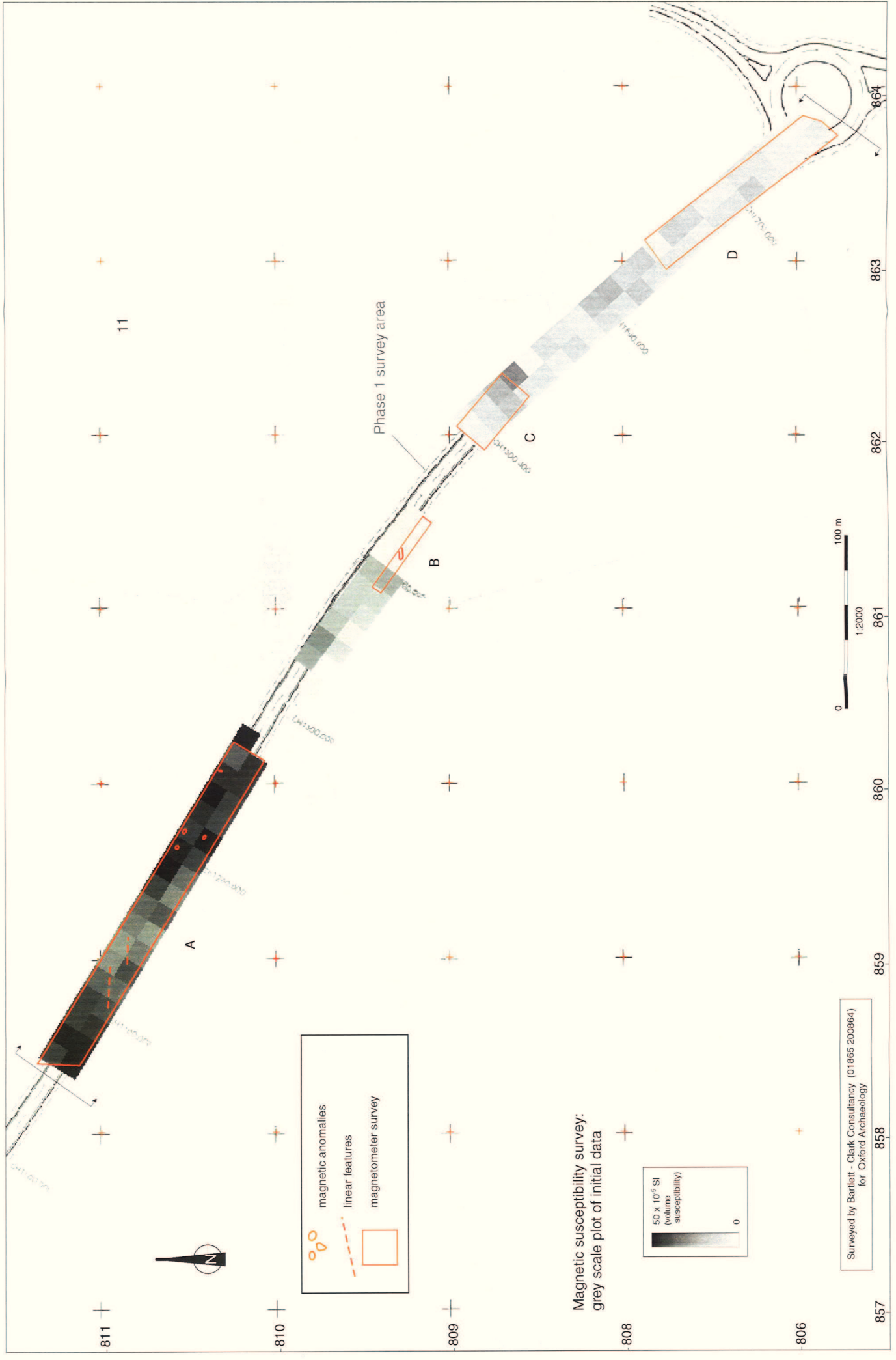


Figure 4: Magnetic Susceptibility Survey (with interpretation of magnetometer survey)

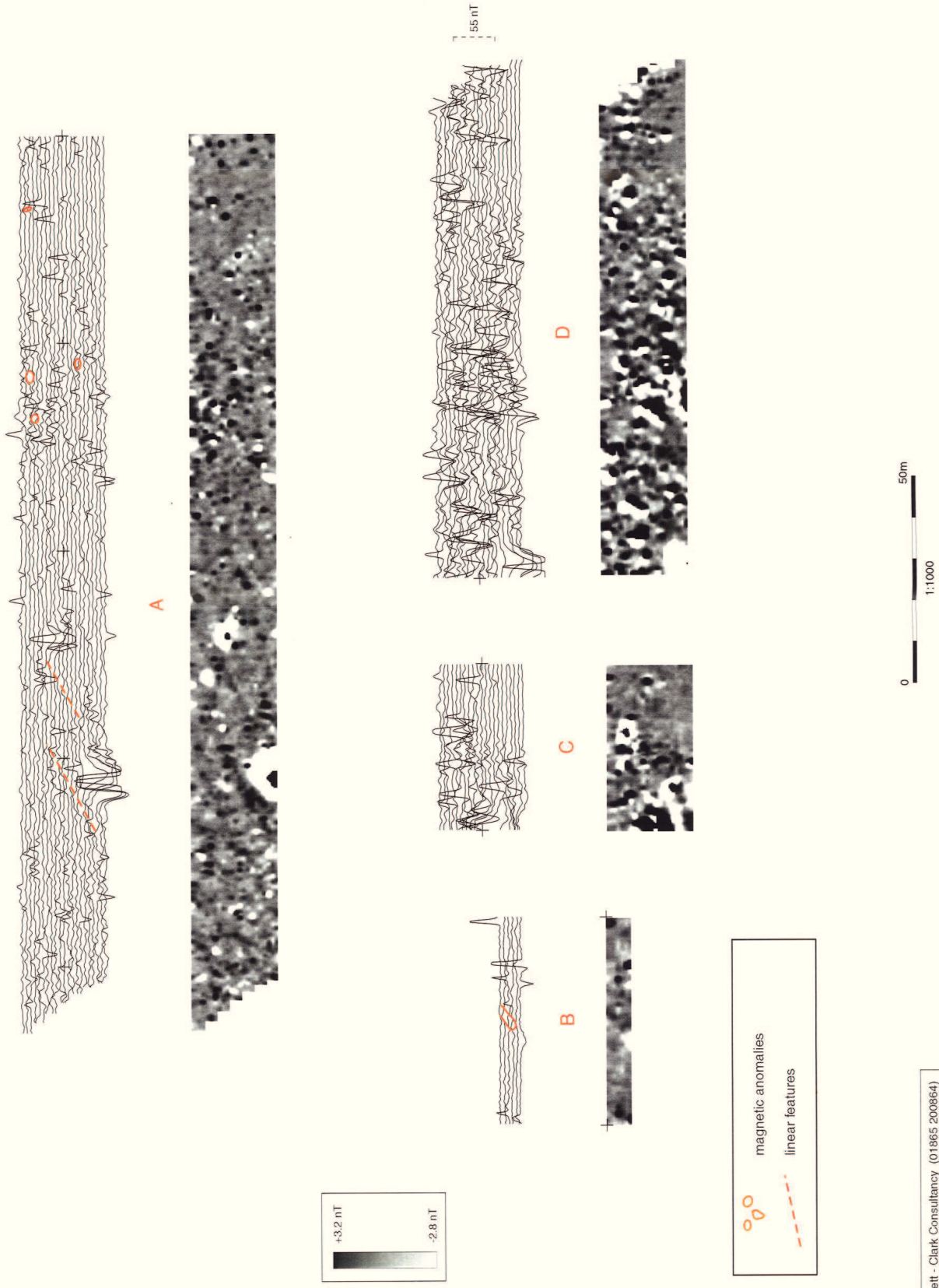


Figure 5: Magnetometer survey data (with interpretation)

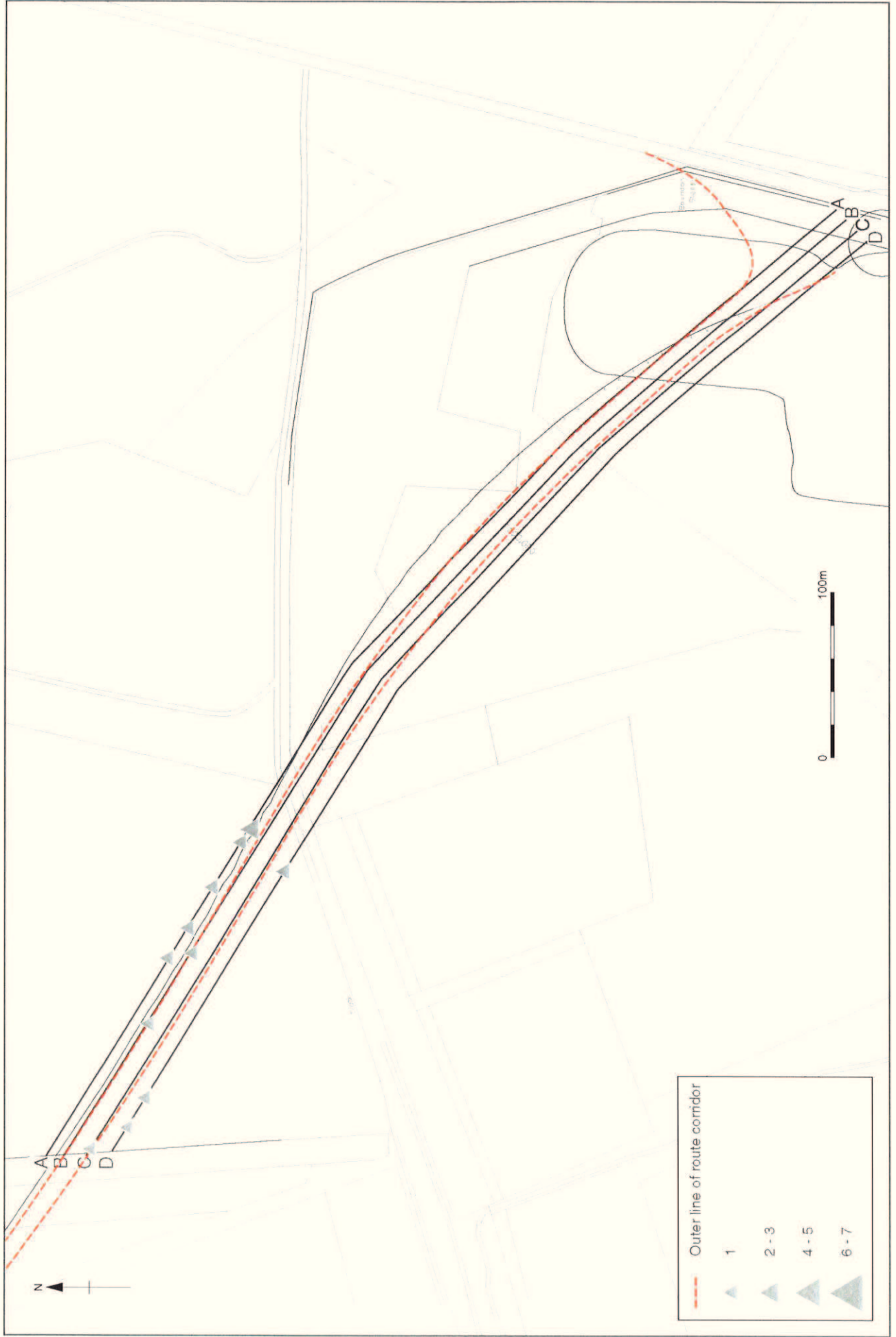


Figure 6: Distribution of flint recovered by fieldwalking survey



Figure 7: Distribution of pottery recovered by fieldwalking survey

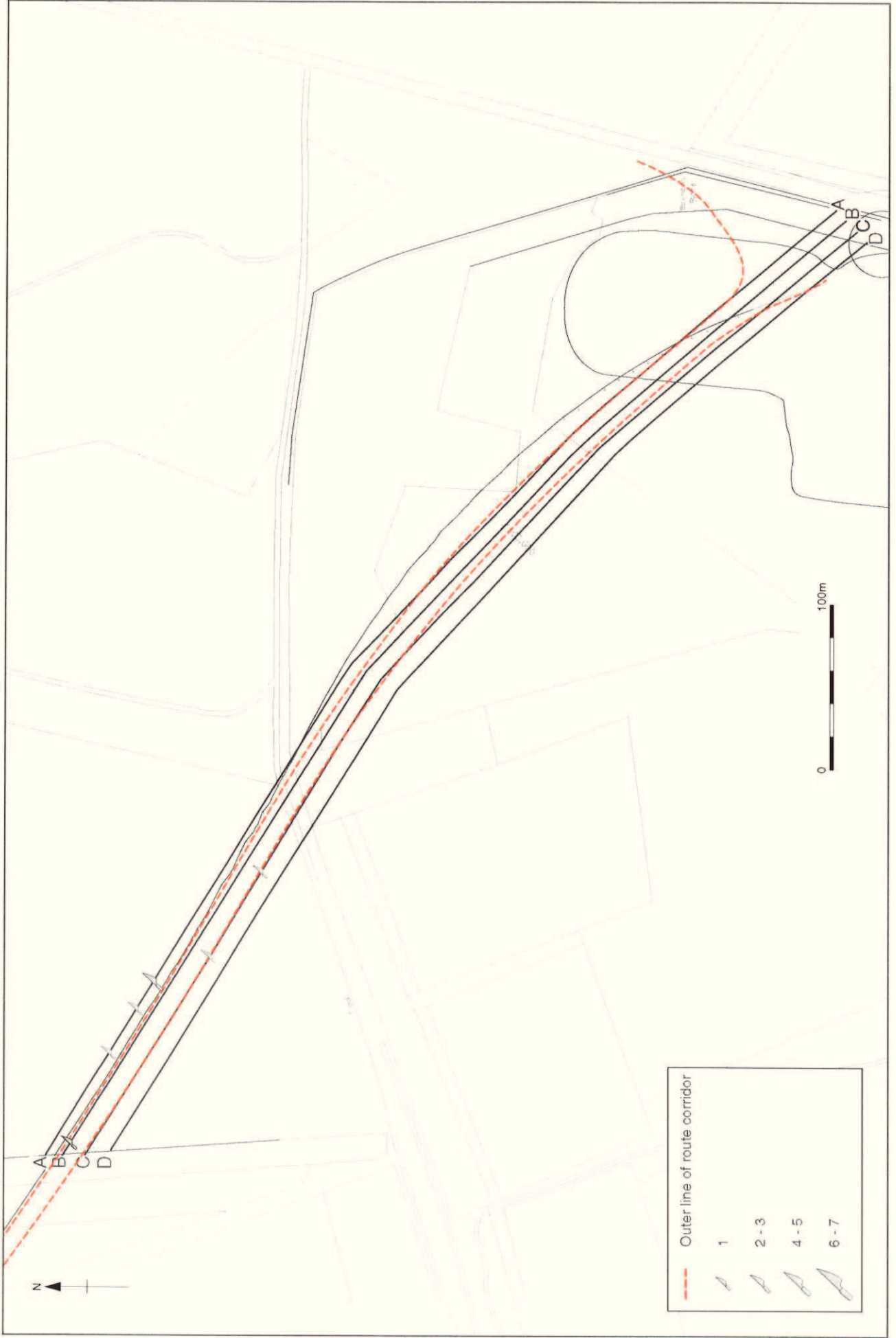
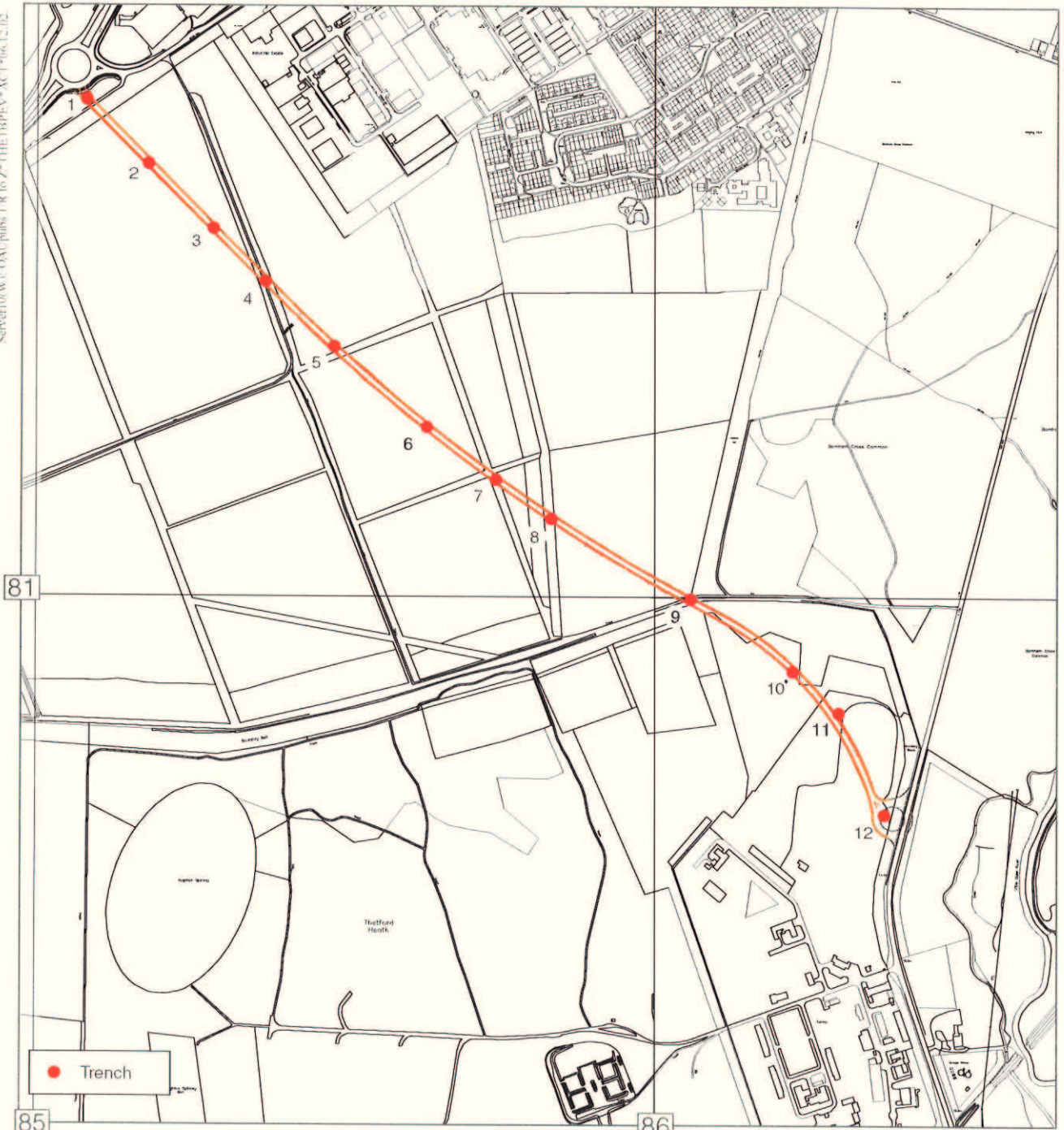


Figure 8: Distribution of metalwork recovered by metal-detecting survey



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Figure 9: Location of geo-technical trial pits

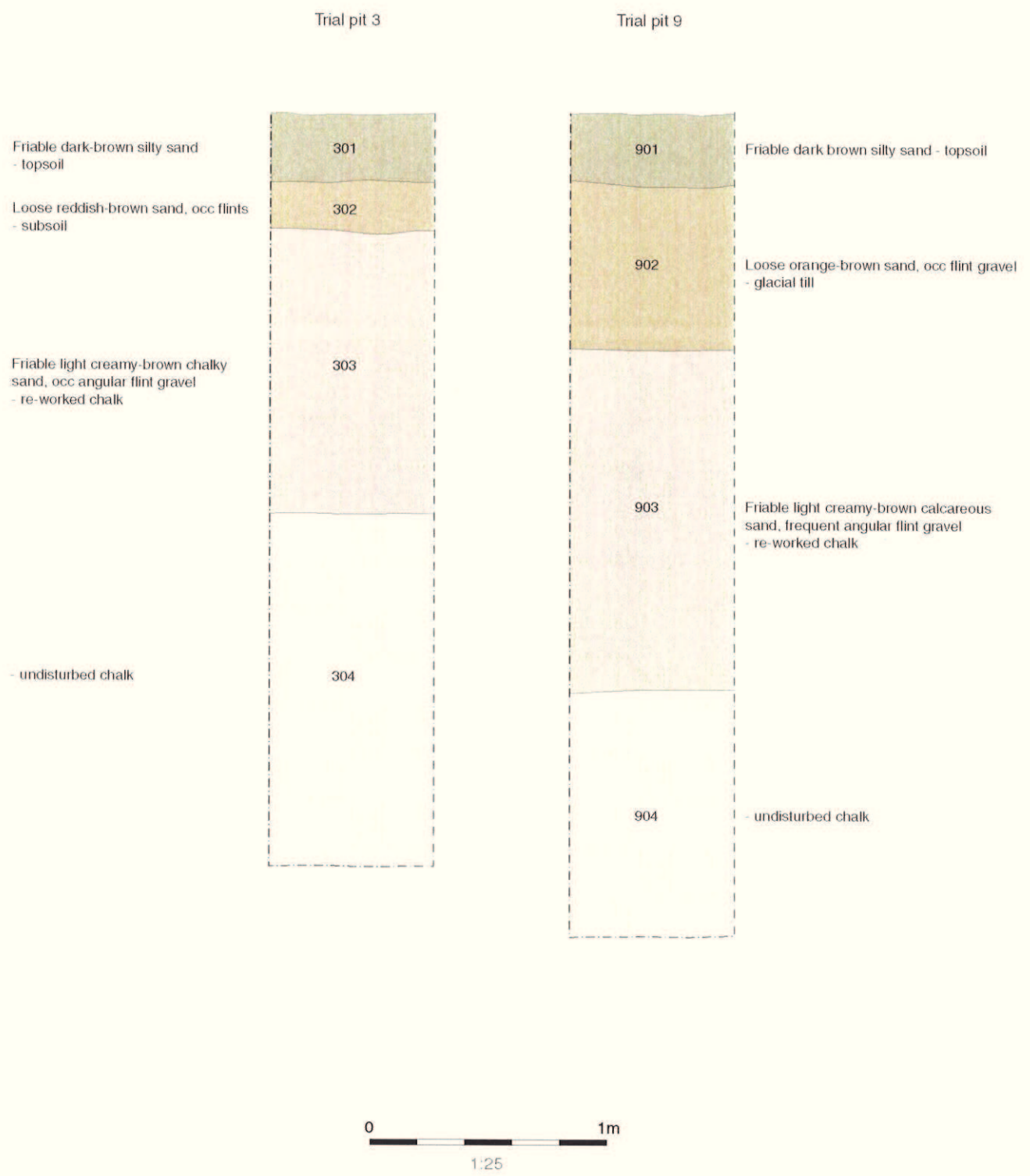
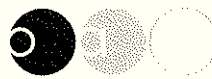


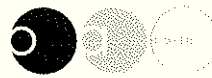
Figure 10: Representative sections of geo-technical trial pits 3 and 9



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