# ARCHAEOLOGICAL EVALUATION ON LAND AT THE FORMER ELLOUGH AIRFIELD COPLAND WAY, WORLINGHAM, SUFFOLK (WOCW 12)

Work Undertaken For
Biocore

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Report Compiled by
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ARCHAEOLOGICAL PROJECT SERVICES

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# 1. SUMMARY

*An archaeological evaluation comprising a surface collection survey (fieldwalking) followed by the excavation of nineteen trial trenches was undertaken on land off Copland Way, Worlingham, Suffolk. The proposed development area lies adjacent to Ellough Airfield Industrial Estate on the outskirts of the town of Beccles.*

*A limited number of undated archaeological features were identified. A small boundary ditch of probable medieval or earlier date and three small pits containing charcoal and burnt flint were recorded. The pits were possibly of prehistoric date.*

*The proposed development area was intersected by two phases of substantial linear drains of 20th century date. Both of these phases were put in place in 1942-44 during the construction of Ellough Airfield. At least parts of the earlier phase of drains were still 'live' draining the extant northwest-to-southeast aligned concrete airfield runway.*

# 2. INTRODUCTION

## 2.1 Definition of an Evaluation

An archaeological evaluation is defined as *'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site. If such archaeological remains are present Field Evaluation defines their character and extent, quality and preservation, and it enables an assessment of their worth in a local, regional, national or international context as appropriate'* (IfA 2008).

## 2.2 Planning Background

Archaeological Project Services (APS) was commissioned by Biocore to undertake a programme of archaeological investigation in advance of the proposed construction of a Bio-gas plant at Copland Way, Worlingham (Ellough Airfield), as detailed in Planning Application DC/11/0670/FUL submitted to Waveney District Council. Suffolk County Council Archaeological Service Conservation Team (Development Control and Planning) stipulated that a programme of archaeological evaluation was required in support of the application. The evaluation consisted of two elements, a fieldwalking or surface collection survey was followed up by a programme of trial trenching.

The fieldwalking and metal detector survey was undertaken on 19th September 2012. No boundaries were present to mark out the extent of the proposed development site and fieldwalking and metal detecting took place on a larger area than that outlined as the site area on Fig. 3.

The trial trenching took place between the 19th and 26th October 2012 in accordance with a specification prepared by Archaeological Project Services (Appendix 1) and approved by the Sarah Poppy of Suffolk County Council Archaeological Service Conservation Team (Development Control and Planning).

## 2.3 Topography and Geology

Ellough Airfield Industrial Estate lies within the parish of Worlingham, Suffolk. The former airfield lies close to the south eastern suburb of the town of Beccles and is located on the southern side of the Waveney Valley. Ellough Airfield occupies a relatively flat area elevated above the town and river to the north and northeast.

The proposed development area itself was

relatively flat and level varying in elevation between 22.2m OD and 23.4m OD across *c.* 250m.

The geology of the proposed development area consisted of Lowestoft Formation Diamicton, formerly known as Lowestoft formation till or boulder clay (http://mapapps.bgs.ac.uk/geologyofbritain/home.html). On the ground this was described as heavy clay with ill-sorted inclusions of chalk and gravel.

## 2.4 Archaeological Setting

The Suffolk Historic Environment Record (SHER) lists a number of archaeological sites and finds within the vicinity of the proposed development area

Excavations in the 1990s in advance of an intensive poultry facility c. 0.6km south of the proposed development area uncovered a brick-kiln and linear features of medieval date (SHER ELO 003-004, Boulter 1996). Remains of post-medieval date related to Potters Farm were also found. The farm was presumably removed to make way for the airfield in 1942 (see below).

Less than 300m south of ELO 003-004 a possible ring-ditch (SHER ELO 005) has been recorded from aerial photographs. This feature was either a burial monument of Bronze Age date, or given that it was overlain by an aircraft dispersal area (now removed) it could have been a WWII military feature.

In 1989 c. 1km northeast of the proposed development site archaeological features and artefacts of Roman date (SHER NHC 007) were recorded during topsoil stripping associated with the construction of the B1127 Copland Way close to its junction with the A146.

East of NHC 007 a scatter of artefacts, predominantly of Roman date, have been found by metal detector (SHER NHC 012)

A moated site of probable medieval date (ELO 002) has been identified from aerial photographic evidence c. 850m southeast of the proposed development area. Historic map evidence indicates that cottages existed on the site in the 19th century and that the moat was partially still in existence. The probable moat is overlain by the airfield perimeter taxi-way.

The overwhelming influence on the landscape of the proposed development area was the construction of Ellough Airfield during WWII (SHER ELO 009).

Construction of Ellough Airfield began in August 1942 (Smith 1995). It was originally designed and planned to be a typical 'A' plan heavy bomber base built with massive concrete runways to accommodate the B17 'Flying' Fortresses' or B24 'Liberators' of the USAAF 8th Air Force. Final construction of the runways was not completed until late summer 1944 by which time it was no longer required the USAAF. From August 1942 until November 1945 the airfield was used by RAF Coastal Command and the Fleet Air Arm, mostly for air sea rescue and anti-shipping operations. Military use or the airfield ceased at the end of WWII.

Approximately 1.2km northwest of the proposed development site a WWII bomb impact crater (WGM 014) has been recorded from aerial photographic evidence.

A rapid map regression exercise employing online resources (www.historic maps.co.uk) indicates that prior to the construction of the airfield the landscape around the proposed development area consisted of a distinctive patchwork of small rectilinear fields, similar to those still in existence at Ellough Moor, 1.5km east of the proposed development area.

These fields were removed away by the construction of the airfield. Following WWII other than the reconnection of Ellough Road/Benacre Road little changed until the late 1980s when the present B1127 Copland Way was constructed, allowing more of the former airfield to pass into industrial use. The WWII control tower was demolished in 2009. Since 1965 the southeast part of the airfield has been used for a variety of civil aviation purposes.

## 3. AIMS AND OBJECTIVES

The aim of the work was to gather sufficient information for the archaeological curator, Suffolk County Council Archaeological Service Conservation Team (Development Control and Planning), to be able to formulate a policy for the management of the archaeological resources present on the site.

The objectives of the fieldwalking survey were to systematically retrieve artefactual material from the surface of the proposed development site, determine its date, distribution and character and to identify any clusters of material which might require further investigation.

The objectives of the trial trenching were to establish the type of archaeological remains that may be present within the proposed development site and to determine their likely extent, spatial arrangement, date, character, function, form and state of preservation. Integral to this it was necessary to establish the way in which any archaeological remains identified fit into patterns of occupation and land-use in the surrounding landscape and to identify any archaeological features from outside the proposed development area which extended into it.

## 4. METHODS

Fieldwalking and metal detecting was undertaken in transects 20m apart following the lines of the stubble. Weather conditions were dry and overcast. Locations of archaeological finds from both fieldwalking and metal detecting were recorded using a Garmin GPS 12 hand-held GPS unit.

Conditions for fieldwalking were only moderate. No agricultural work had been conducted on the field following harvesting of the cereal crop and stubble was still present. This resulted in a variable visibility of the field surface with in certain places 0-10% surface visibility while in others places visibility attained 50-60%. Surface soil was a sandy clay with abundant unworked flint fragments and broken land drains.

A total of nineteen trial trenches were excavated. All trenches were 1.8m wide and all except Trenches 3 and 5 were 40m long. Trench 3 was 41m long whilst Trench 5 was a ‘double’ cruciform trench being in effect 80m long.

The positioning of some trenches was informed by the results of the surface collection survey. Most trenches were, however, located in order to achieve maximum coverage across the proposed development site.

The location of the trenches was set out using a differential survey grade Thales Global Positioning System (GPS).

Topsoil was mechanically removed to the surface of geologically derived boulder clays. In all trenches except Trench 12 no subsoil or other overburden was present and topsoil was quite shallow being c. 0.3m deep. In Trench 12 topsoil c. 0.55m deep.

Removal of topsoil and was undertaken by mechanical excavator using a toothless ditching bucket working under archaeological supervision. The trenches were inspected for archaeological remains and exposed surfaces hand-cleaned where necessary.

Each element of the archaeological features found during the evaluation was allocated a unique reference number or context number. Written, drawn and photographic records relating to each feature and/or context were made. A brief description and interpretation of each context appears in Appendix 2

Appropriate scales were used for plans and sections drawings were. Recording was undertaken according to standard APS practice.

Following excavation, finds were examined and a period date assigned where possible (Appendix 3).

## 5. RESULTS

### Fieldwalking Results

Locations of individual finds are recorded on Fig. 3 and listed in Appendix 3. Although flints were abundant on the field surface none was worked. Three fire-cracked burnt flints were recovered. These were also unworked but are of the type often, but not exclusively, found on prehistoric sites. The three items (Fig. 3, Nos 4, 6 and 7) were found in relative close proximity. Only a single piece of pottery was found, a sherd of 18th century black earthenware. The remaining finds were all metalwork and where datable post medieval or later. None obviously related to the use of the site as an airfield.

### Trail Trenching Results

The results of the archaeological evaluation are discussed thematically. Numbers in either square or standard brackets are context numbers (see Appendix 2).

Table 1 (below) summarises the findings for each trench.

| Trench | Description |
|---|---|
| 1 | Small north-to-south aligned ditch [01]/[03] with charcoal flecked fill. Undated, possibly Medieval or earlier? |
| 2 | No archaeological features, some peri-glacial patterning. |
| 3 | Drainage feature [06] of 20th century date; partly machine excavated |
| 4 | No archaeological features, much peri-glacial patterning. |
| 5 | 'Double' trench, two 40m trenches crossing; peri-glacial patterning throughout. Drainage feature of 20th century date [21]/[23]/[35] extended through this trench |
| 6 | Large infilled pond/marl pit [26] of late post-medieval or 19th century date cut by drainage feature [31] of 20th century date which was partially machine excavated. |
| 7 | One ice wedge type peri-glacial feature investigated by hand excavation |
| 8 | No archaeological features |
| 9 | Drainage feature [23] of 20th century date. One small type peri-glacial feature investigated by hand excavation |
| 10 | One small undated archaeological feature [24]. Drainage feature [37] of 20th century date |
| 11 | Drainage feature [08] of 20th century date |
| 12 | Drainage feature [33] of 20th century date |

| Trench | Description |
|---|---|
| 13 | Drainage feature [29] of 20th century date. Machine excavated to near base of cut |
| 14 | Two drainage features [19] and [21] of 20th century date |
| 15 | One peri-glacial hollow investigated by hand excavation |
| 16 | Drainage feature [10] of 20th century date partly hand-excavated. |
| 17 | No archaeological features |
| 18 | Two small undated archaeological features [12] and [14]. Two drainage features [16] and [35] of 20th century date |
| 19 | One ice wedge type peri-glacial feature investigated by hand excavation |

**Table 1; Trench Summary**

Linear scour marks, the results of recent ploughing were evident in all trenches. At least two phases of field drains/mole drains were also encountered.

**Periglacial Features**

Periglacial features of various kinds were encountered in many of the trenches. These features were formed under permafrost conditions prevalent when the last ice sheets retreated from the east of England at the end of the Pleistocene geological epoch. Seasonal thawing of the frozen ground surface has left characteristic scars within the boulder clays of the proposed development area. Small hollows or curvilinear ice-wedges were also recorded. Where there was any doubt as to the origin of such features they were investigated by hand excavation (see Table 1). More striking was the patterned ground; networks of linked ice-wedges filled with dark orange coloured sandy-clay. These features formed somewhat irregular quasi-polygonal patterns, not the very regular geometric patterns sometimes seen. Patterned ground was particular evident in Trenches 2 and 5.

Although of passing interest these features were wholly of geological rather than archaeological origin.

**Undated Archaeological Features (Figs. 4 and 5)**

In total four features that would conventionally be regarded as archaeological were recorded. These were spread across three trenches.

The most substantial archaeological feature was found in Trench 1. It consisted of a small north-to-south aligned ditch [01]/[03] broken by gap or causeway. The ditch was no more than 0.6m wide and 0.1m deep and filled by mid grey slightly silty clay flecked with charcoal. The ditch was (Plate 1). No artefacts or other dating material was recovered from this feature. The ditch was probably a field boundary.

Three small sub-circular or sub-oval pits of similar character were also identified. Two of the pits were located in Trench 18, c. 3.0m apart separated by a drainage feature of 20th century date (Plate 2). Pit [12] was 0.4m wide and 0.25m deep with a distinctive asymmetric profile (Plate 3). The brown silty clay fill of this feature (13) contained significant amounts of charcoal. Burnt flint was recovered from this fill. Possible degraded pottery sherds and a few fragments of burnt flint were present in Environmental Samples, along with charcoal (Rackham, Appendix 4)

The second pit [15] present Trench 18 was somewhat larger measuring 0.6m across but was not more than 0.15 deep (Plate 4). Its fill (16) was similar to the fill of pit [12], although containing less burnt flint. Samples yielded a few fragments of heat affected flint, a little fired earth and possible fragments of degraded pottery. A single fragment of possible charred

hazelnut shell is also present.

A third similar pit [24] was recorded in Trench 10. This pit was 0.35m in diameter, 0.06m deep (Plate 5) and filled by a mottled yellow-brown silty clay heavily flecked with charcoal. Burnt flint was recovered from the fill of this feature.

**Pond or Extraction Pit of 14th or 15th Century Date**
**(Fig. 4)**

Towards the northern end of Trench 6 a large feature [26] c. 8.5m across was recorded. Its fill (27) was a homogenous chalk-flecked mid orange-brown silty clay. It was cut by 20th century drainage feature [31]. Fragments of tile and large iron horseshoe, both of late medieval date, were recovered from feature [26].

The size, nature and position of this feature indicate that it was probably an infilled pond or extraction pit.

**Drainage Features of 20th Century Date**
**(Figs. 3 and 5)**

The most numerous feature type recorded comprised substantial linear drainage features of 20th century date. These features were mostly between 1.6 and 2.4m wide.

Two phases of these features were encountered. The earliest phase consisted of two elements.

The most thoroughly investigated of the drainage features ran approximately east-to-west across the southern half of the proposed development site. It was recorded as [08], [09], [19], [29] and [33]. In Trench 16 it was filled with mixed yellow and grey clay (10) containing occasional fragments of brick and tile of late 19th or 20th century date. The sides of the cut were vertical or slightly undercut, possibly indicating that the drain had been mechanically excavated. Further to the west in Trench 13 drain [29] was investigated by machine excavation (Plate 6). A precast sectional concrete pipe was present at a depth of 1.2m below the modern surface. The base of the drain cut was c. 1.5m below the present ground surface; the concrete pipe was c. 0.3m in diameter. The fill of the drain cut (28) largely consisted of coarse rubble containing soft red bricks, yellow bricks and concrete. This feature was recorded in plan in three other trenches; [08] Trench 11, [19] Trench 14, [33] Trench 12. In all cases varying amounts of brick rubble was present within the mixed clay fills (Plate 8).

The second element of the earlier phase of drains ran on a broadly north-south alignment. It was recorded in Trenches 3, 6, 10 and 18 as [06], [31], [37] and [16] respectively. It was partly machine excavated in Trench 6 and recorded in plan in the other trenches. Its fills were similar to those of the other early phase drain consisting of mixed clays containing varying amounts of brick rubble.

One feature belonging to the secondary phase of drains was recorded in Trenches 9, 14 and 18. It was aligned northwest-to-southeast and was recorded in plan only as [21], [23] and [35]. It was filled with mixed brown and yellow clays containing lenses of topsoil. This feature extended north-westwards through Trench 5, although this was not recognised at the time of excavation. The mixed nature of the patterned ground in Trench 5 effectively camouflaged this feature, which was largely filled with redeposited 'natural' yellow clays.

## 6. DISCUSSION

Even though conditions were by no means ideal for fieldwalking the number of finds recovered was low. The metal detectorists also regarded the field as unusually quiet

in terms of numbers of finds present (and the stubble and limited field surface visibility did not affect their artefact recovery rate). No concentrations of material were present. While the three pieces of fire cracked pebble were in relative close proximity such finds are usually present in dense concentrations

The small pits found in Trenches 10 and 18 possibly served some function associated with cooking, and were most likely to be of prehistoric date. They probably represented fleeting and sporadic episodes of temporary occupation.

The pre-airfield landscape of small rectilinear fields was perhaps the result of relatively late enclosure of the marginal heavy-clay land of Ellough Moor. The north-to-south aligned ditch found in Trench 1 clearly belongs to the landscape predating the fields removed during the construction of the airfield. A medieval or earlier date for this feature therefore seems likely.

The Ordnance Survey 1:2500 map of 1883 marks numerous small ponds in the area southwest, south and southeast of the proposed development area. Like feature [26] in Trench 6 they are all adjacent to field boundaries. These ponds may have been originally dug as clay extraction pits associated with the medieval brick kiln found 0.6km south of the proposed development area (SHER ELO 003-004, Boulter 1996). Alternatively feature [26] may have been a marl pit. A sizable opencast pit dug down to the underlying chalk, which was then mixed with clay and used as a soil improver. A combination of the two purposes is also possible.

Most of the earlier phase of 20th century drainage features were located exactly on top of hedged and ditch field boundaries removed to make way for the airfield. The drainage function of the field boundaries was replicated and replaced by the culverted drains [08]/[09]/[19]/[29]/[33] and [06]/[16]/[31]/[37] in 1942-44. These features drain the northwest-to-southeast aligned runway, currently used for storing silage. It should be noted that the southernmost section of [06]/[16]/[31]/[37] follows a different alignment from the pre-airfield boundaries.

The secondary phase of 20th century drainage features ([21]/[23]/[35]) is visible an one of three parallel open drains on Ordnance Survey maps dating from the 1950s to the 1980s. These features drained the northeast-to-southwest aligned runway. The northern parts of this runway began to be removed after the construction of the B1127, Copland Way in 1989. It is likely that these drains were rendered redundant by the construction of the road and therefore infilled. It is unlikely that they were culverted and are therefore probably not still 'live'

It is tempting to speculate that heavy clay conditions and drainage problems may have caused delays to the construction of the WWII airfield. The elaborate 'double' system of drains encountered during the evaluation would seem to attest to this.

## 7. CONCLUSIONS

Firmly dated archaeological remains of pre-20th century date were scarce at the site, although the WWII drainage system appears to have followed the post-medieval field pattern apparent on 19th century maps. A ditch recoded in Trench 1 may be of medieval or earlier date and three small pits recorded in Trenches 10 and 18 attest to a possible presence in the area during the prehistoric period. Confirmation of a prehistoric date for these pits would be possible through C14 dating of charred remains retrieved from environmental samples.

The heavy ill-drained clays of the plateau on which Ellough Airfield stands probably meant that the area remained marginal for settlement and agriculture until recent centuries.

## 8. ACKNOWLEDGEMENTS

Archaeological Project Services wishes to acknowledge the assistance of Biocore who commissioned the fieldwork and Report. The work was coordinated by Dale Trimble who edited this report along with Tom Lane, Senior Archaeologist of APS. Fieldwalking was undertaken by Tom Lane and metal detecting by Kevin Elfleet and Mark Richardson.

## 9. PERSONNEL

| | |
|---|---|
| Project Coordinators: | Dale Trimble, Gary Taylor |
| Project Officer: | John Percival: |
| Site Staff: | Giles Emery |
| Surveying: | Dale Trimble |
| Finds Processing: | Denise Buckley |
| Photographic reproduction: | John Percival |
| Illustrations: | John Percival |

## 10. BIBLIOGRAPHY

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Smith, G. 1995 *Suffolk Airfields in the Second World War* Countryside Books, Newbury

## 11. ABBREVIATIONS

| | |
|---|---|
| APS | Archaeological Project Services |
| IfA | Institute of Field Archaeologists |
| OD | Ordnance Datum (height above sea level) |
| SHER | Suffolk Historic Environment Record |

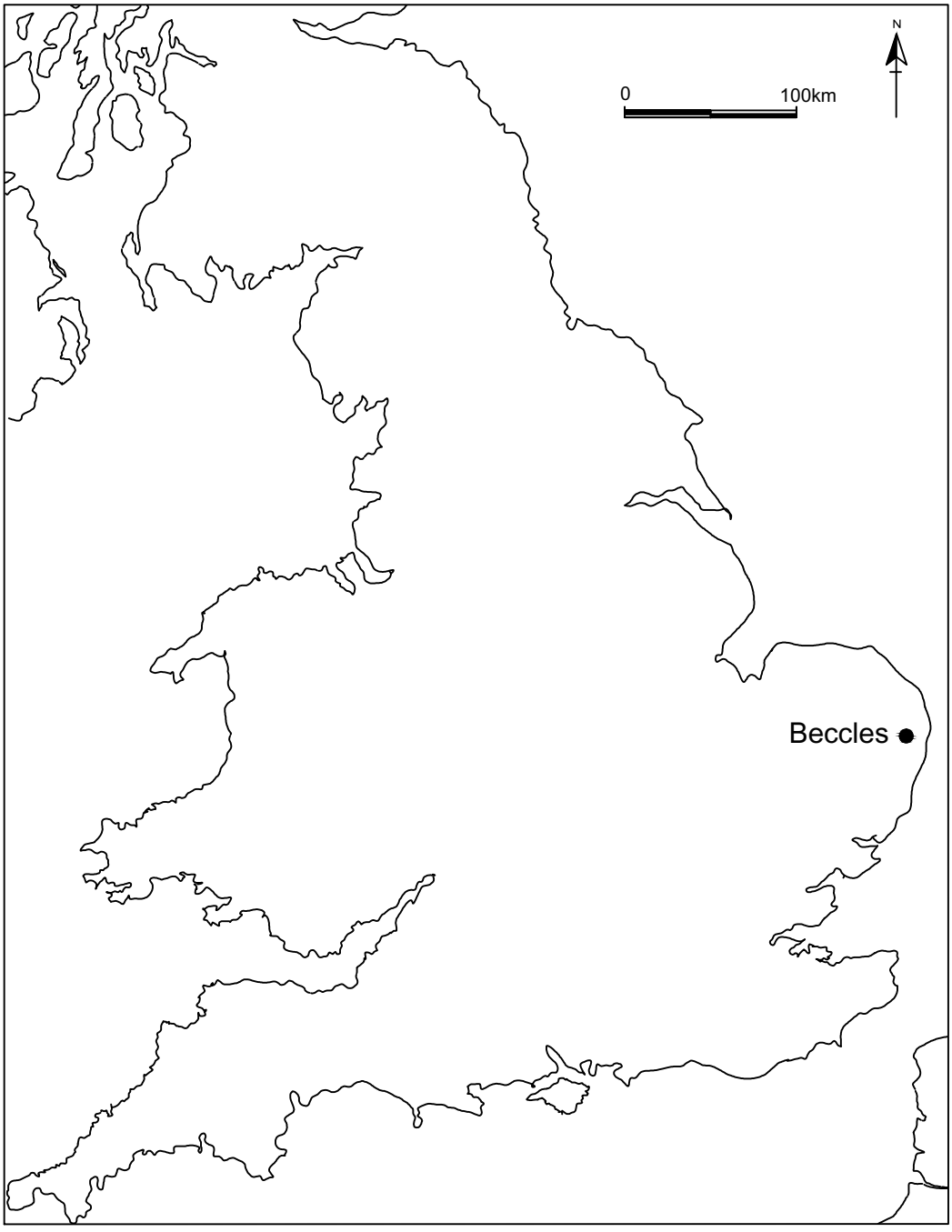


Figure 1 - General location plan

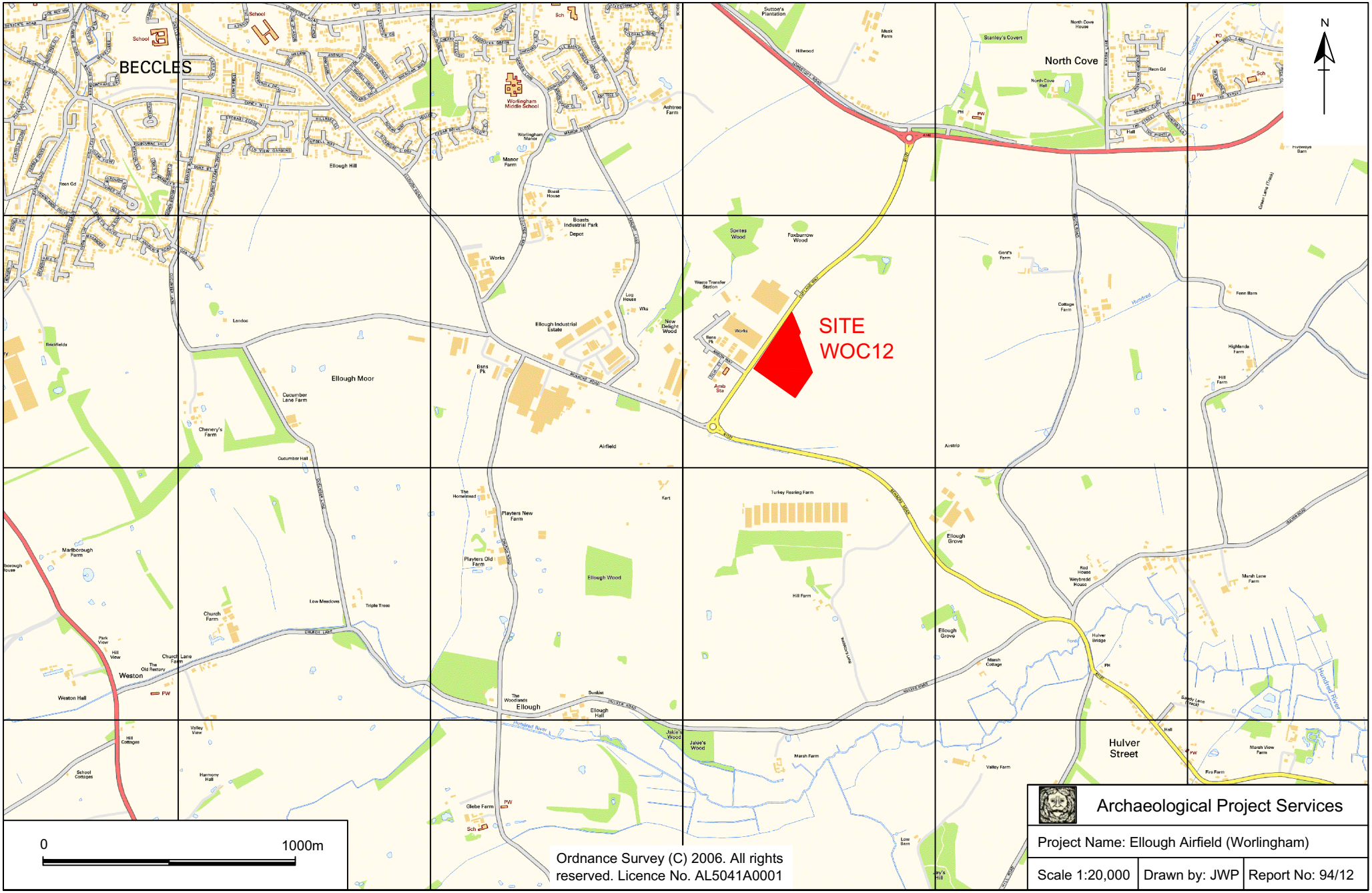


Figure 2 - Site location plan

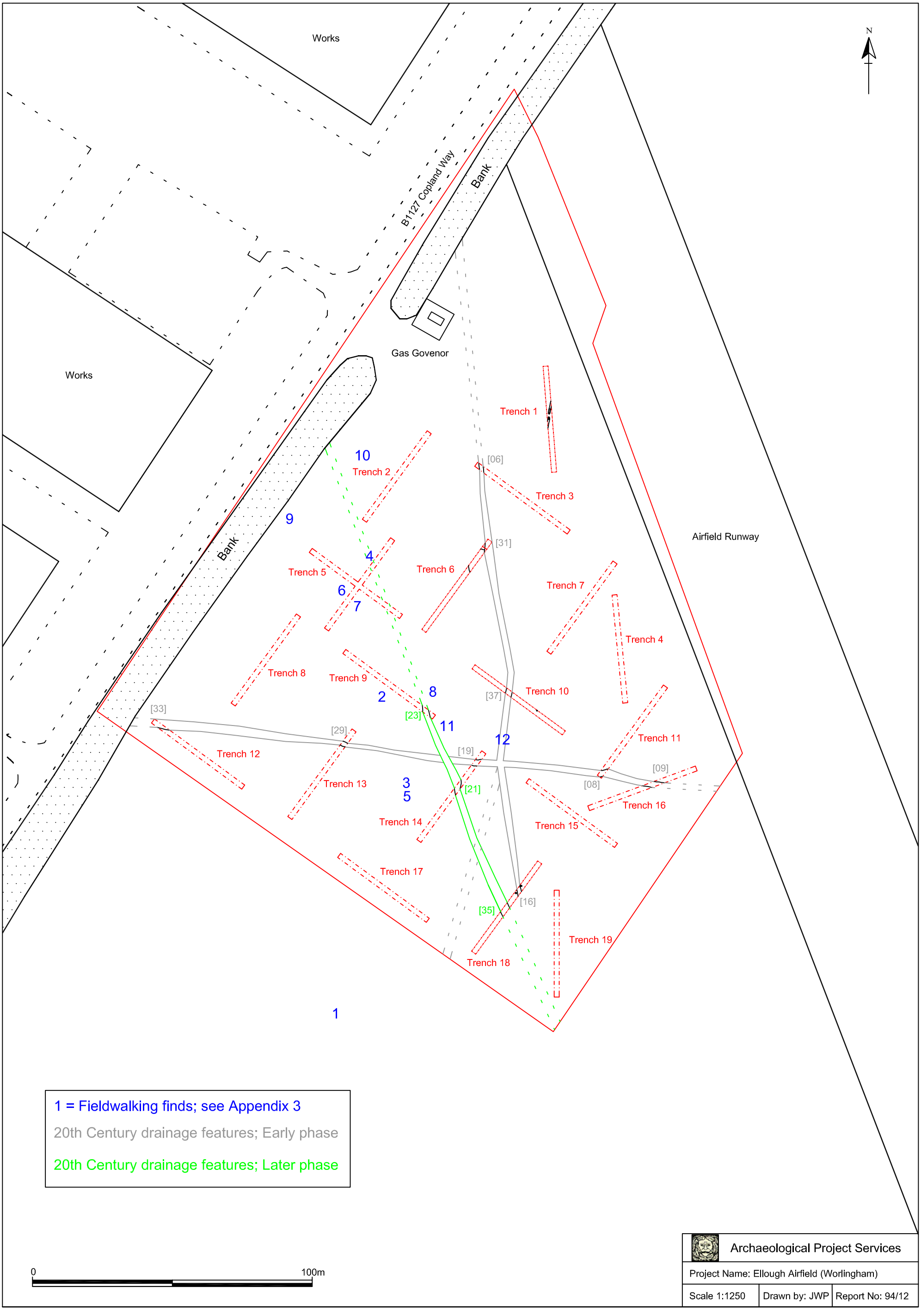


Figure 3 - Trench location plan and fieldwalking results

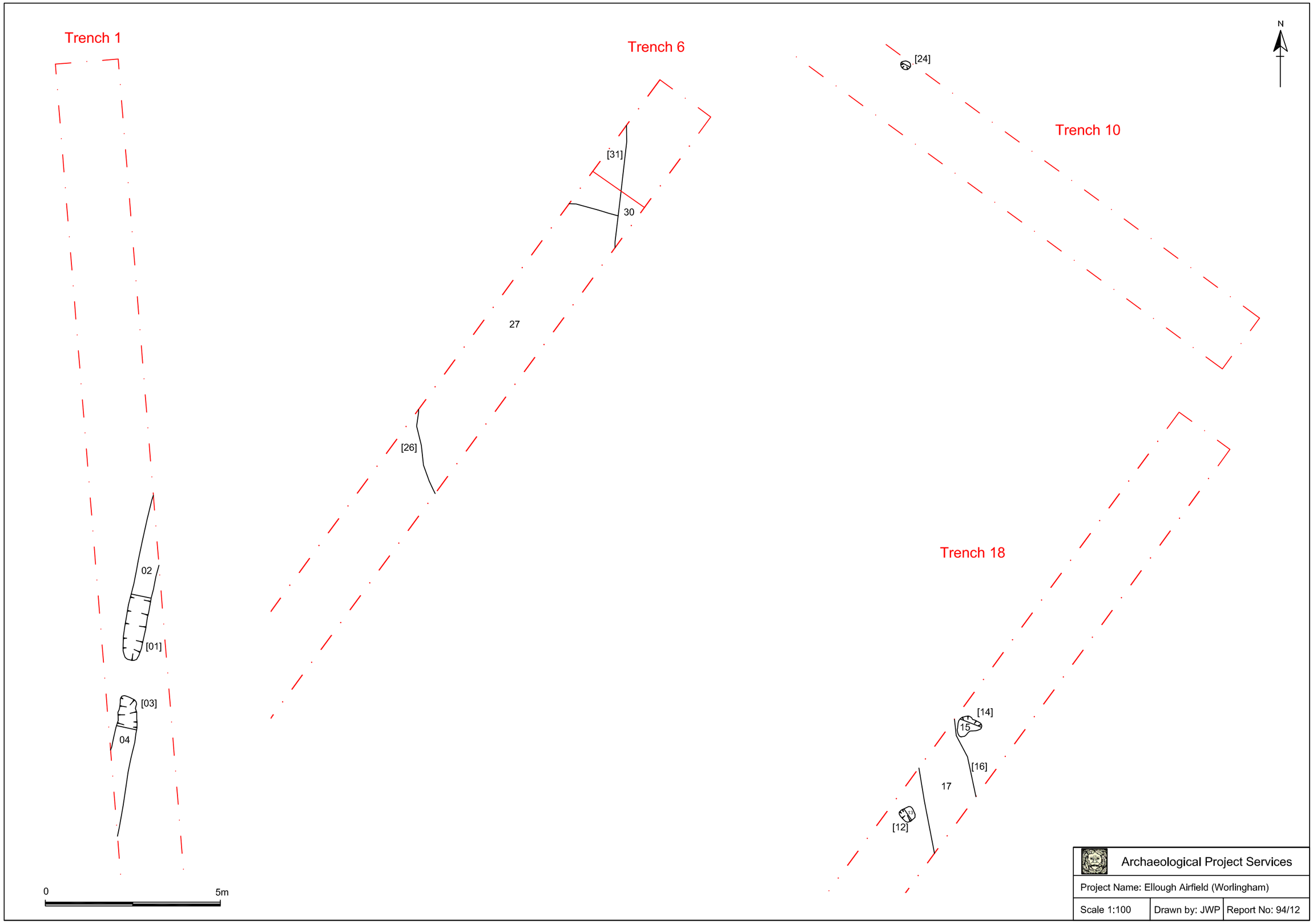


Figure 4 - Plans of Trenches 1, 6, 10 and 18

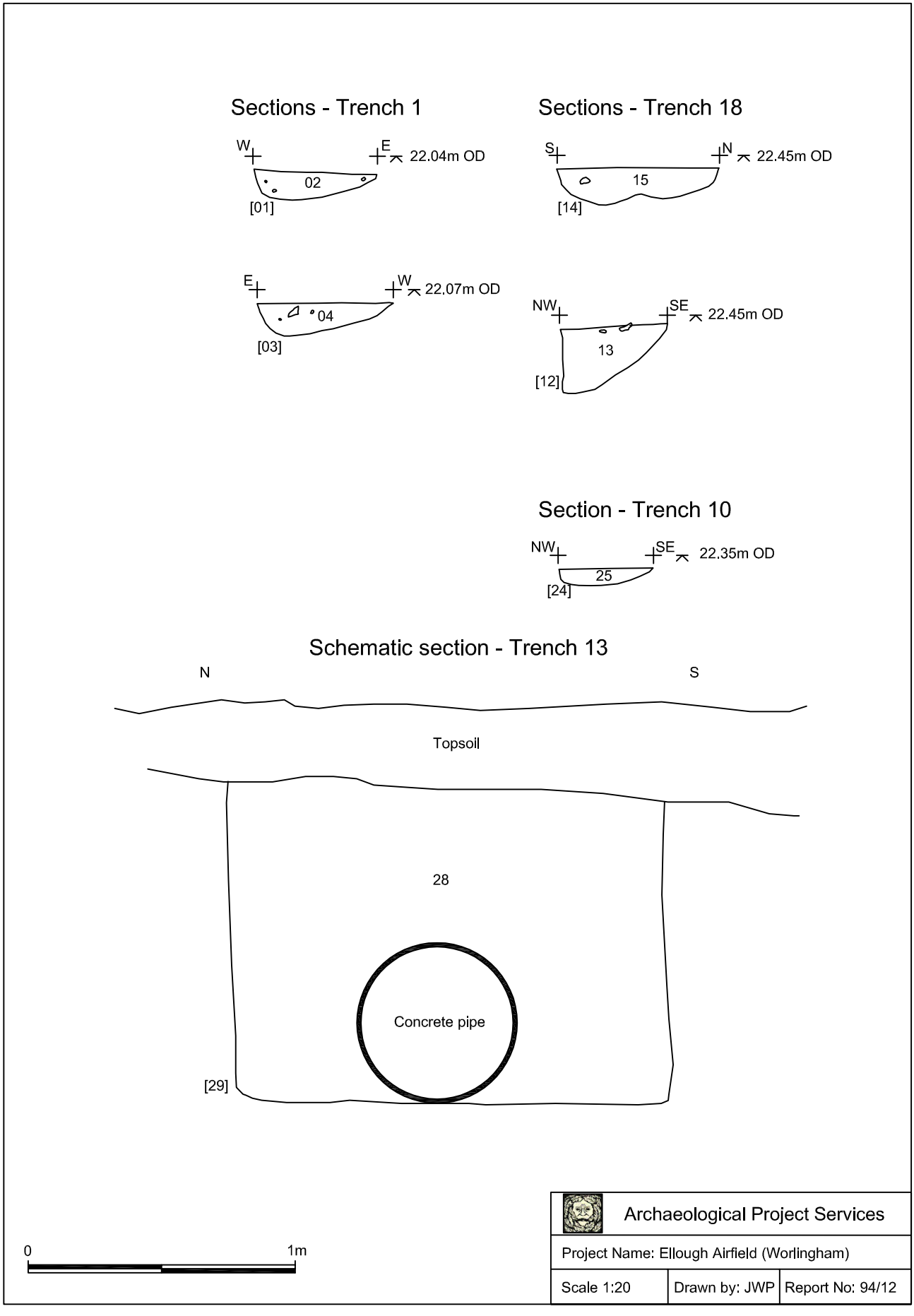


Figure 5 - Sections

Plate 1. Looking northwest at ditch [01] in Trench 1, 2m scale.

Plate 2. Looking southwest down Trench 18 at pits [12] and [14] pre-excavation separated by drain [16], 2m scale.

Plate 3. Looking southwest at pit [12] (Trench 18), post-excavation, 0.2m scale

Plate 4. Looking southwest at pit [14] (Trench 18), post-excavation, 0.2m scale

Plate 5. Looking northeast at pit [24] (Trench 10), post-excavation, 0.2m scale.

Plate 6. Looking southwest down Trench 13 towards drain [29], 2m scale

Plate 7. Looking southeast at concrete pipe in base of drain [29] (Trench 13), 1.0m scales.

Plate 8. Looking southwest at drain [19], Trench 14, 2m scale.

**APPENDIX 1**

**LAND AT FORMER ELLOUGH AIRFIELD**
**COPLAND WAY**
**WORLINGHAM**
**SUFFOLK**

# SPECIFICATIONS FOR ARCHAEOLOGICAL FIELDWALKING, METAL DETECTOR SURVEY AND TRIAL TRENCHING

**SEPTEMBER 2011**

FIELDWALING AND METAL DECTECTING

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## 1 SUMMARY


1.1 *This document comprises a specification for fieldwalking and metal detecting on land at the former Ellough Airfield, Copland Way, Worlingham, Suffolk.*

1.2 *The development site is potentially archaeologically sensitive, lying in an area with potential for Mesolithic to Early Bronze Age activity.*

1.3 *An extension to the adjacent Cove Farm quarry is proposed. A programme of archaeological evaluation is required in order to provide information to assist in the determination of any application. As the next stage fieldwalking of the extension area is proposed.*

1.4 *On completion of the fieldwork a report will be prepared detailing the findings of the investigation. The report will consist of a text describing the nature of the archaeological deposits located and will be supported by illustrations and photographs.*


## 2 INTRODUCTION

2.1 This document comprises a specification for fieldwalking and metal detecting on land at the former Ellough Airfield, Copland Way, Worlingham, Suffolk.

2.2 The document contains the following parts:

2.2.1 Overview

2.2.2 The archaeological and natural setting.

2.2.3 Stages of work and methodologies to be used.

## 3 SITE LOCATION

3.1 Worlingham is located 2km east of Beccles in the administrative district of Waveney, Suffolk. The former Ellough Airfield is situated about 1.5km southeast of the village centre, on the southeast side of Copland Way, at National Grid Reference TM 453 883. Covering 3.3ha, the application site has recently been used for the arable agriculture, having previously functioned as an airfield.

## 4 PLANNING BACKGROUND

4.1 A planning application (DC/11/0670/FUL) for construction of an anaerobic digestion plant and associated building has been submitted to Waveney District Council. Suffolk Archaeological service has advised that an archaeological evaluation is required and provided a brief for investigations.

## 5 SOILS AND TOPOGRAPHY

5.3 The site lies on level ground at c. 22m OD. Local soils are well drained calcareous fine loamy soils of the Badsey 2 association developed on limestone gravel (Hodge *et al* 1983, 101).

## 6 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

6.1 Archaeological desk-based assessment (Bradley-Lovekin 2006), geophysical survey (Smalley 2007), small-scale evaluation (Malone 2007) and palaeoenvironmental assessment (Rackham 2008) have been undertaken of the proposed extension area. The desk based-assessment identified findspots of artefacts and flint working sites of Mesolithic, Neolithic, and Early Bronze Age date, as well as a small amount of material of Romano-British date, within a 1000m radius of the proposed quarry extension. Twenty-seven flint artefacts were recovered from the surface of a deposit of natural dark brown ‘hard’ sand

within quarry working just to the west.

6.2 Geophysical survey and limited trenching failed to identify clear archaeological features within the extension area although the potential remained for buried horizons which might preserve archaeological remains. Investigation of adjacent quarry sections suggested that these are not to be expected and that evidence of prehistoric activity might be found at the sand surface or already incorporated into the ploughsoil through truncation of underlying deposits. A programme of fieldwalking is now proposed in order to investigate this. Further work might be indicated if any significant clusters are identified.

## 7 AIMS AND OBJECTIVES

7.1 The aim of the work will be to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site.

7.2 The objectives of the fieldwalking will be to:

7.2.1 Retrieve artifactual material from the surface of the site.

7.2.2 Determine the date, distribution and character of any artefacts present on the surface of the site.

7.2.3 Identify any clusters of material which might require further investigation.

## 8 SITE OPERATIONS

8.1 General Considerations

8.1.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the investigation. A Risk Assessment will be prepared prior to the investigation, and updated throughout its duration.

8.1.2 The work will be undertaken according to the relevant codes of practice issued by the Institute of Field Archaeologists (IFA). Archaeological Project Services is an IFA registered archaeological organisation (no. 21) managed by a Member (MIFA) of the institute.

8.1.3 All work will be carried out in accordance with *Standards for Field Archaeology in the East of England, 2003*.

8.1.4 Any artefacts found during the investigation and thought to be 'treasure', as defined by the Treasure Act 1996, will be removed from site to a secure store and the discovery promptly reported to the appropriate coroner's office.

8.2 Methodology

8.2.1 All artefacts will be collected from within transects spaced at 20m intervals. Fieldwalking will occur in all suitable parts of the site.

8.2.2 All retrieved artefacts will be three dimensionally plotted using a survey grade differential GPS system. Each find will be given an individual identification number, bagged separately, and its exact position plotted to a tolerance of 5cm or less.

8.2.3 The GPS survey will be accuarately located onto the Ordnance Survey National Grid at a tolerance of +- 1.m.

8.2.4 Note will also be made of any soil marks or earthworks and these will be mapped by the EDM/GPS

## 9 POST-EXCAVATION AND REPORT

9.0 Stage 1

9.0.1 All finds recovered during the investigation will be examined and, where appropriate, washed, marked, bagged and labelled according to their individual survey code. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at the City and County Museum, Lincoln.

9.0.2 Survey data will be downloaded and processed.

9.1 Stage 2

0.1.1 Finds will be sent to specialists for identification and dating.

0.1.2 The finds data will be correlated with the survey results to determine significant concentrations or associations.

9.2 Stage 3

9.2.1 On completion of stage 2, a report detailing the findings of the investigation will be prepared. This will consist of:

- A non-technical summary of the results of the investigation.
- A description of the archaeological setting of the site.
- Description of the topography and geology of the investigation area.
- Description of the methodologies used during the investigation and discussion of their effectiveness in the light of the results.
- A text describing the findings of the investigation.
- Plans showing the survey area and artefact distributions.
- Interpretation of the results and their context within the surrounding landscape.
- Specialist reports on the finds from the site.
- A consideration of the significance of the results.

## 10 ARCHIVE

10.1 The documentation, finds, photographs and other records and materials generated during the investigation will be sorted and ordered into the format acceptable to North Lincolnshire Museums Service in accordance with the 2007 *Guidelines for deposition of Archaeological Archives with North Lincolnshire Museum.* A site code will be obtained prior to commencement of work.

10.2 Upon completion and submission of the report, the landowner will be contacted to arrange legal transfer of title to the archaeological objects retained during the investigation from themselves to the receiving museum. The transfer of title will be effected by a standard letter supplied to the landowner for signature.

## 11 REPORT DEPOSITION

11.1 Copies of the investigation report will be sent to: the client Sibleco UK, and the North Lincolnshire Sites and Monuments Record (hard copy and pdf) and the Regional Science Advisor (in pdf format).

## 12 PUBLICATION

12.1 Details of the project will be entered into the OASIS on-line database. A report of the findings of the investigation will be submitted for inclusion in the journal *Lincolnshire History and Archaeology*. Notes or articles describing the results of the investigation will also be submitted for publication in the appropriate national journals: *Proceedings of the Prehistoric Society* for discoveries of prehistoric date, *Britannia* for discoveries of Roman date and *Medieval Archaeology* and *Journal of the Medieval Settlement Research Group* for medieval and later remains.

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## 13 CURATORIAL MONITORING

13.1 Curatorial responsibility for the project lies with the North Lincolnshire Sites and Monuments Record Office. As much written notice as possible, will be given to the archaeological curator prior to the commencement of the project to enable them to make appropriate monitoring arrangements.

## 15 VARIATIONS TO THE PROPOSED SCHEME OF WORKS

14.1 Variations to the scheme of works will only be made following written confirmation of acceptability from the archaeological curator.

14.2 Should the archaeological curator require any additional investigation beyond the scope of the brief for works, or this specification, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

## 16 STAFF TO BE USED DURING THE PROJECT

15.1 The work will be directed by Tom Lane MIFA, Senior Archaeologist, Archaeological Project Services. The on-site works will be supervised by an Archaeological Supervisor with knowledge of archaeological evaluations of this type. Archaeological excavation will be carried out by Archaeological Technicians, experienced in projects of this type.

15.2 The following organisations/persons will, in principle and if necessary, be used as subcontractors to provide the relevant specialist work and reports in respect of any objects or material recovered during the investigation that require their expert knowledge and input. Engagement of any particular specialist subcontractor is also dependent on their availability and ability to meet programming requirements.

| Task | Body to be undertaking the work |
|---|---|
| Conservation | Conservation Laboratory, City and County Museum, Lincoln. |
| Pottery Analysis | Prehistoric: Dr D Knight, Trent and Peak Archaeological Trust / Carol Allen, independent specialist<br><br>Roman: A Boyle, APS with B Precious, independent specialist<br><br>Anglo-Saxon-medieval: A Boyle, APS. |
| Lithics | Barry Bishop, independent specialist |
| Other Artefacts | J Cowgill, independent specialist (formerly City of Lincoln Archaeology Unit) |

## 17 PROGRAMME OF WORKS

17.1 The site works are timetabled to take 1-2 days. Post-excavation work is timetabled to take about 5 days, depending on the quantity and complexity of archaeological remains encountered.

## 18 INSURANCES

18.1 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability insurance to £10,000,000. Additionally, the company maintains Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation can be supplied on request.

## 19 COPYRIGHT

19.1 Archaeological Project Services shall retain full copyright of any commissioned reports under the *Copyright, Designs and Patents Act* 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.

19.2 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.

19.3 In the case of non-satisfactory settlement of account then copyright will remain fully and exclusively with Archaeological Project Services. In these circumstances it will be an infringement under the *Copyright, Designs and Patents Act* 1988 for the client to pass any report, partial report, or copy of same, to any third party. Reports submitted in good faith by Archaeological Project Services to any Planning Authority or archaeological curator will be removed from said Planning Authority and/or archaeological curator. The Planning Authority and/or archaeological curator will be notified by Archaeological Project Services that the use of any such information previously supplied constitutes an infringement under the *Copyright, Designs and Patents Act* 1988 and may result in legal action.

19.4 The author of any report or specialist contribution to a report shall retain intellectual copyright of their work and may make use of their work for educational or research purposes or for further publication.

## 20 BIBLIOGRAPHY

Hodge, CAH, Burton, RGO, Corbett, WM, Evans, R, and Seale, RS, 1984 *Soils and their use in Eastern England*, Soil Survey of England and Wales **13**

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## 1 SUMMARY

*1.1 This document comprises a specification for the archaeological field evaluation of land at the former Ellough Airfield, Copland Way, Worlingham, Suffolk.*

*1.2 The area is archaeologically sensitive. previous investigations close by revealed medieval and post-medival remains including a series of shallow ditches and a 13th-14th century brick kiln. Roman remains have been found to the east and northeast. A medieval moat is located to the northeast. The site is within the former Ellough airfield.*

*1.3 A programme of archaeological evaluation by trial trenching is required at the site.*

*1.4 On completion of the fieldwork a report will be prepared detailing the findings of the investigation. The report will consist of a text describing the nature of the archaeological deposits located and will be supported by illustrations and photographs.*

## 2 INTRODUCTION

2.1 This document comprises a specification for the archaeological field evaluation of land at the former Ellough Airfield, Copland Way, Worlingham, Suffolk.

2.2 The document contains the following parts:

2.2.1 Overview

2.2.2 The archaeological and natural setting

2.2.3 Stages of work and methodologies to be used

2.2.4 List of specialists

2.2.5 Programme of works and staffing structure of the project

## 3 SITE LOCATION

3.1 Worlingham is located 2km east of Beccles in the administrative district of Waveney, Suffolk. The former Ellough Airfield is situated about 1.5km southeast of the village centre, on the southeast side of Copland Way, at National Grid Reference TM 453 883. Covering 3.3ha, the application site has recently been used for the arable agriculture, having previously functioned as an airfield.

## 4 PLANNING BACKGROUND

4.1 A planning application (DC/11/0670/FUL) for construction of an anaerobic digestion plant and associated building has been submitted to Waveney District Council. Suffolk Archaeological service has advised that an archaeological evaluation is required and provided a brief for investigations.

## 5 SOILS AND TOPOGRAPHY

5.1 The site is at the junction of soils of the, to the north, Newport 3 Association, and Hanslope Association deposits to the south. Newport 3 soils are typical brown sands formed in glaciofluvial sands (Hodge *et al*. 1984, 274). Hanslope Association are calcareous pelosols developed in chalky till (Hodge *et al*. 1984, 209). The site is on fairly flat land at c. 22m OD.

## 6 ARCHAEOLOGICAL OVERVIEW

6.1 Previous investigations just to the southeast revealed medieval and post-medieval remains. A series of ditch-like features were revealed together with a brick kiln dating to the 13th-14th century. Features relating to the 1845 tithe map layout of the farm were also recorded. Roman remains and artefacts were recorded to the east of the site during stripping for a new road to the Ellough Airfield industrial estate. A scatter of Roman artefacts, including metalwork and pottery, were found to the northeast. A medieval moat is also located to the northeast. Ditched field boundaries of probably post-medieval date have also been recorded on aerial photographs of the area to the northeast of the site. Ellough Airfield is a former military establishment.

## 7 AIMS AND OBJECTIVES

7.1 The aim of the work will be to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site.

7.2 The objectives of the work will be to:

7.2.1 Retrieve artefactual material from the surface of the site.

7.2.2 Determine the date, distribution and character of any artefacts present on the surface of the site.

7.2.3 Identify any clusters of material which might require further investigation.

7.2.4 Establish the type of archaeological activity that may be present within the site.

7.2.5 Determine the likely extent of archaeological activity present within the site.

7.2.6 Determine the date and function of the archaeological features present on the site.

7.2.7 Determine the state of preservation of the archaeological features present on the site.

7.2.8 Determine the spatial arrangement of the archaeological features present within the site.

7.2.9 Determine the extent to which the surrounding archaeological features extend into the application area.

7.2.10 Establish the way in which the archaeological features identified fit into the pattern of occupation and land-use in the surrounding landscape.

## 8 LIAISON WITH THE ARCHAEOLOGICAL CURATOR

8.1 Close contact will be maintained with the archaeological curator throughout the investigation to ensure that the scheme of works fulfils their requirements.

## 9 FIELDWALKING AND METAL DETECTING

9.1 Reasoning for this technique

9.1.1 Fieldwalking and metal detecting enable the identification and assessment of archaeological artefacts on the ground surface and in the ploughsoil, thereby assisting with the determination of the date, location and extent of potential buried archaeological remains.

9.2 Methodology

9.2.1 Transects will be spaced at 20m intervals and the survey will occur in all suitable parts of the site. In the event of significant artefact concentrations being identified, localised areas will be surveyed in greater detail.

9.2.2 Artefacts will be collected and their locations surveyed. Excepting where there are archaeological, logistical or health & safety reasons not to do so, all artefacts will be retrieved. Each find will be given an individual identification number, bagged separately, and its position recorded.

## 10 TRIAL TRENCHING

10.1 Reasoning for this technique

10.1.1 Trial trenching enables the *in situ* determination of the sequence, date, nature, depth, environmental potential and density of archaeological features present on the site.

10.1.2 The trial trenching arrangement has been specified as a 5% sample of the 3.3ha site area. the results of the fieldwalking and metal detecting may be used to guide the location of trenches.

10.2 General Considerations

10.2.1 All work will be undertaken following statutory Health and Safety requirements in operation at the time of the investigation.

10.2.2 The work will be undertaken according to the relevant codes of practice issued by the Institute for Archaeologists (IfA). *Archaeological Project Services* is an IfA Registered Archaeological Organisation (No. 21), managed by a member (MIfA) of the institute.

10.2.3 Any and all artefacts found during the investigation and thought to be 'treasure', as defined by the Treasure Act 1996, will be removed from site to a secure store and promptly reported to the appropriate coroner's office.

10.2.4 Excavation of the archaeological features exposed will only be undertaken as far as is required to determine their date, sequence, density and nature. Not all archaeological features exposed will necessarily be excavated. However, the investigation will, as far as is reasonably practicable, determine the level of the natural deposits to ensure that the depth of the archaeological sequence present on the site is established.

10.2.5 Open trenches will be marked by orange mesh fencing attached to road irons or similar poles. Subject to the consent of the archaeological curator, and following the appropriate recording, the trenches, particularly those of excessive depth, will be backfilled as soon as possible to minimise any health and safety risks.

10.3 Methodology

10.3.1 Removal of the topsoil and any other overburden will be undertaken by mechanical excavator using a toothless ditching bucket. To ensure that the correct amount of material is removed and that no archaeological deposits are damaged, this work will be supervised by Archaeological Project Services. On completion of the removal of the overburden, the nature of the underlying deposits will be assessed by hand excavation before any further mechanical excavation that may be required.

Thereafter, the trenches will be cleaned by hand to enable the identification and analysis of the archaeological features exposed.

10.3.2 Investigation of the features will be undertaken only as far as required to determine their date, form and function. The work will consist of half- or quarter-sectioning of features as required and, where appropriate, the removal of layers. Should features be located which may be worthy of preservation *in situ*, excavation will be limited to the absolute minimum, (*ie* the minimum disturbance) necessary to interpret the form, function and date of the features.

10.3.3 The archaeological features encountered will be recorded on Archaeological Project Services pro-forma context record sheets. The system used is the single context method by which individual archaeological units of stratigraphy are assigned a unique record number and are individually described and drawn.

10.3.4 Plans of features will be drawn at a scale of 1:20 and sections at a scale of 1:10. Should individual features merit it, they will be drawn at a larger scale.

10.3.5 Throughout the duration of the trial trenching a photographic record consisting of black and white prints (reproduced as contact sheets) and colour slides will be compiled. The photographic record will consist of:

- the site before the commencement of field operations.
- the site during work to show specific stages of work, and the layout of the archaeology within individual trenches.
- individual features and, where appropriate, their sections.
- groups of features where their relationship is important.
- the site on completion of fieldwork

10.3.6 Should human remains be encountered, they will be left *in situ* with excavation being limited to the identification and recording of such remains. If removal of the remains is necessary the appropriate Ministry of Justice licences will be obtained and the local environmental health department informed. If relevant, the coroner and the police will be notified.

10.3.7 Finds collected during the fieldwork will be bagged and labelled according to the individual deposit from which they were recovered ready for later washing and analysis.

10.3.8 The spoil generated during the investigation will be mounded along the edges of the trial trenches with the topsoil being kept separate from the other material excavated for subsequent backfilling.

10.3.9 The precise location of the trenches within the site and the location of site recording grid will be established by a GPS and/or EDM survey.

## 10 ENVIRONMENTAL ASSESSMENT

10.1 If appropriate, during the investigation specialist advice will be obtained from an environmental archaeologist. The specialist will visit the site and will prepare a report detailing the nature of the environmental material present on the site and its potential for additional analysis should further stages of archaeological work be required. The results of the

specialist's assessment will be incorporated into the final report

## 11 POST-EXCAVATION AND REPORT

11.1 Stage 1

11.1.1 On completion of site operations, the records and schedules produced during the trial trenching will be checked and ordered to ensure that they form a uniform sequence constituting a level II archive. A stratigraphic matrix of the archaeological deposits and features present on the site will be prepared. All photographic material will be catalogued: the colour slides will be labelled and mounted on appropriate hangers and the black and white contact prints will be labelled, in both cases the labelling will refer to schedules identifying the subject/s photographed.

11.1.2 All finds recovered during the trial trenching will be washed, marked, bagged and labelled according to the individual deposit from which they were recovered. Any finds requiring specialist treatment and conservation will be sent to the Conservation Laboratory at Lincoln.

11.2 Stage 2

11.2.1 Detailed examination of the stratigraphic matrix to enable the determination of the various phases of activity on the site.

11.2.2 Finds will be sent to specialists for identification and dating.

11.3 Stage 3

11.3.1 On completion of stage 2, a report detailing the findings of the investigation will be prepared. This will consist of:

11.3.1.1 A non-technical summary of the results of the investigation.

11.3.1.2 A description of the archaeological setting of the site.

11.3.1.3 Description of the topography and geology of the investigation area.

11.3.1.4 Description of the methodologies used during the investigation and discussion of their effectiveness in the light of the results.

11.3.1.5 A text describing the findings of the investigation.

11.3.1.6 Plans of the trenches showing the archaeological features exposed. If a sequence of archaeological deposits is encountered, separate plans for each phase will be produced.

11.3.1.7 Sections of the trenches and archaeological features.

11.3.1.8 Interpretation of the archaeological features exposed and their context within the surrounding landscape.

11.3.1.9 Specialist reports on the finds from the site.

11.3.1.10 Appropriate photographs of the site and specific archaeological features or groups of features.

11.3.1.11 A consideration of the significance of the remains found, in local,

regional, national and international terms, using recognised evaluation criteria.

## 12 ARCHIVE

12.1 The documentation, finds, photographs and other records and materials generated during the investigation will be sorted and ordered into the format acceptable to the appropriate local museum. This sorting will be undertaken according to the guidelines and conditions stipulated by the museum, and appropriate national guidelines, for long-term storage and curation.

## 13 REPORT DEPOSITION

13.1 Copies of the investigation report will be sent to: the client; and the Suffolk County Council Historic Environment Record.

## 14 PUBLICATION

14.1 Details of the investigation will be input to the Online Access to the Index of Archaeological Investigations (OASIS).

15.2 Notes or articles describing the results of the investigation will also be submitted for publication in the appropriate national journals: *Medieval Archaeology* for medieval and later remains, and *Britannia* for discoveries of Roman date.

## 15 CURATORIAL MONITORING

15.1 Curatorial responsibility for the archaeological work undertaken on the site lies with the Suffolk Historic Environment Service. They will be given written notice of the commencement of the project to enable them to make monitoring arrangements.

## 16 VARIATIONS TO THE PROPOSED SCHEME OF WORKS

16.1 Variations to the scheme of works will only be made following written confirmation from the archaeological curator, the client and their consultant.

16.2 Should the archaeological curator require any additional investigation beyond the scope of the brief for works, or this specification, then the cost and duration of those supplementary examinations will be negotiated between the client and the contractor.

## 17 STAFF TO BE USED DURING THE PROJECT

17.1 The work will be directed by Tom Lane MIfA, Senior Archaeologist, Archaeological Project Services. The on-site works will be supervised by an Archaeological Supervisor with knowledge of archaeological evaluations of this type. Archaeological excavation will be carried out by Archaeological Technicians, experienced in projects of this type.

17.2 The following organisations/persons will, in principle and if necessary, be used as subcontractors to provide the relevant specialist work and reports in respect of any objects or material recovered during the investigation that require their expert knowledge and input. Engagement of any particular specialist subcontractor is also dependent on their availability and ability to meet programming requirements.

| Task | Body to be undertaking the work |
|---|---|
| Conservation | Conservation Laboratory, Lincoln. |
| Pottery Analysis | Prehistoric: D Trimble, APS/TPAU<br>Roman: A Beeby, APS |

| | |
|---|---|
| | Post-Roman: A Beeby, APS |
| Other Artefacts | J Cowgill, independent specialist/G Taylor, APS |
| Human Remains Analysis | R Kendall, Durham University |
| Animal Remains Analysis | P Cope-Faulkner, APS |
| Environmental Analysis | Environmental Archaeology Consultancy, or Val Fryer, independent specialist |
| Radiocarbon dating | Beta Analytic Inc., Florida, USA |
| Dendrochronology dating | University of Sheffield Dendrochronology Laboratory |

## 18 PROGRAMME OF WORKS AND STAFFING LEVELS

18.1 Fieldwork is expected to be undertaken by appropriate staff, including supervisors and assistants, and to take about two days.

18.2 Post-excavation analysis and report production will take about 6 days. A project officer or supervisor will undertake most of the analysis, with assistance from the finds supervisor, CAD illustrator and external specialists.

## 19 INSURANCES

19.1 Archaeological Project Services, as part of the Heritage Trust of Lincolnshire, maintains Employers Liability insurance to £10,000,000. Additionally, the company maintains Public and Products Liability insurances, each with indemnity of £5,000,000. Copies of insurance documentation are enclosed.

## 20 COPYRIGHT

20.1 Archaeological Project Services shall retain full copyright of any commissioned reports under the *Copyright, Designs and Patents Act* 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.

20.2 Licence will also be given to the archaeological curators to use the documentary archive for educational, public and research purposes.

20.3 In the case of non-satisfactory settlement of account then copyright will remain fully and exclusively with Archaeological Project Services. In these circumstances it will be an infringement under the *Copyright, Designs and Patents Act* 1988 for the client to pass any report, partial report, or copy of same, to any third party. Reports submitted in good faith by Archaeological Project Services to any Planning Authority or archaeological curator will be removed from said Planning Authority and/or archaeological curator. The Planning Authority and/or archaeological curator will be notified by Archaeological Project Services that the use of any such information previously supplied constitutes an infringement under the *Copyright, Designs and Patents Act* 1988 and may result in legal action.

20.4 The author of any report or specialist contribution to a report shall retain intellectual copyright of their work and may make use of their work for educational or research purposes or for further publication.

## 21 BIBLIOGRAPHY

Hodge, CAH, Burton, RGO, Corbett, WM, Evans, R, and Seale, RS, 1984 Soils and their use in Eastern England, Soil Survey of England and Wales 13

Specification: Version 1, 14/09/12

# APPENDIX 2

## Context Summary

| Context | Trench | Description | Interpretation | Date |
|---|---|---|---|---|
| 01 | 1 | N-S aligned linear cut, 0.6m wide, at least 0.1m deep | Cut of former boundary ditch | Undated |
| 02 | 1 | Mid grey slightly silty clay flecked with charcoal | Fill of [01] | Undated |
| 03 | 1 | N-S aligned linear cut, 0.6m wide, at least 0.1m deep | Cut of former boundary ditch | Undated |
| 04 | 1 | Mid grey slightly silty clay flecked with charcoal | Fill of [03] | Undated |
| 05 | 3 | Mixed yellow and grey clays and brick rubble | Fill of [06] | 1942-44 |
| 06 | 3 | NNW-SSE aligned linear cut *c.* 1.6m wide | Cut of Drain | 1942-44 |
| 07 | 11 | Mixed yellow and grey clays and brick rubble | Fill of [08] | 1942-44 |
| 08 | 11 | E-W aligned linear cut *c.* 2.3m wide | Cut of Drain | 1942-44 |
| 09 | 16 | E-W aligned linear cut *c.* 2.2m wide | Cut of Drain | 1942-44 |
| 10 | 16 | Mixed yellow and grey clays and brick rubble | Fill of [09] | 1942-44 |
| 11 | 16 | Mixed yellow and grey clays | Fill of [09] | 1942-44 |
| 12 | 18 | Pit with asymmetric profile 0.4m wide and 0.25m | ?Cooking pit | Undated |
| 13 | 18 | Brown silty clay; contained charcoal and. burnt flint | Fill of [12] | Undated |
| 14 | 18 | Sub-circular pit 0.6m wide and 0.15m | ?Cooking pit | Undated |
| 15 | 18 | Brown silty clay; contained charcoal and. burnt flint | Fill of [14] | Undated |
| 16 | 18 | NNW-SSE aligned linear cut *c.* 2.0m wide | Cut of Drain | 1942-44 |
| 17 | 18 | Mixed yellow and grey clays and brick rubble | Fill of [16] | 1942-44 |
| 18 | 14 | Mixed yellow and grey clays and brick rubble | Fill of [19] | 1942-44 |
| 19 | 14 | E-W aligned linear cut *c.* 2.4m wide | Cut of Drain | 1942-44 |
| 20 | 14 | Mixed brown and yellow clays with lenses of topsoil | Fill of [21] | *c.* 1989 |
| 21 | 14 | NW-SE aligned linear cut *c.* 2.3m wide | Cut of Drain | *c.* 1989 |
| 22 | 9 | Mixed brown and yellow clays with lenses of topsoil | Fill of [23] | *c.* 1989 |
| 23 | 9 | NW-SE aligned linear cut *c.* 3.4m wide | Cut of Drain | *c.* 1989 |
| 24 | 10 | Sub-circular pit 0.35m wide and 0.06m | ?Cooking pit | Undated |
| 25 | 10 | Mottled yellow-brown silty clay heavily flecked with charcoal; contained burnt flint | Fill of [24] | Undated |
| 26 | 6 | Large feature, 8.5m across | Pond or marl pit | Late 18th or 19th century |
| 27 | 6 | Mid orange-brown silty clay, flecked with chalk | Fill of [26] | Late 18th or 19th century |

| Context | Trench | Description | Interpretation | Date |
|---|---|---|---|---|
| 28 | 13 | Mixed yellow and grey clays and brick rubble | Fill of [29] | 1942-44 |
| 29 | 13 | E-W aligned linear cut *c.* 1.8 wide, 1.2m deep. | Cut of Drain | 1942-44 |
| 30 | 6 | Mixed yellow and grey clays and brick rubble | Fill of [31] | 1942-44 |
| 31 | 6 | NNW-SSE aligned linear cut *c.* 2.5m wide | Cut of Drain | 1942-44 |
| 32 | 12 | Mixed yellow and grey clays and brick rubble | Fill of [19] | 1942-44 |
| 33 | 12 | E-W aligned linear cut *c.* 2.6m wide | Cut of Drain | 1942-44 |
| 34 | 18 | Mixed brown and yellow clays with lenses of topsoil | Fill of [35] | *c.* 1989 |
| 35 | 18 | NW-SE aligned linear cut *c.* 3.4m wide | Cut of Drain | *c.* 1989 |
| 36 | 10 | Mixed yellow and grey clays and brick rubble | Fill of [37] | 1942-44 |
| 37 | 10 | NNW-SSE aligned linear cut *c.* 2.6m wide | Cut of Drain | 1942-44 |
| 38 | - | Unstratified finds recovered from surface of whole evaluation area | Unstratified | |

## Appendix 3

THE FINDS

### FIELDWALKING FINDS
*By Tom Lane*

**FIND NO. EASTING NORTHING MATERIAL DESCRIPTION DATE PERIOD**
1 645367 288286 copper alloy folded sheet post-medieval PM
2 645384 288399 copper alloy button late post-medieval PM
3 645395 288365 copper alloy disc, 22mm x 19mm, thin sheet undated
4 645381 288449 flint burnt flint, pot boiler undated
5 645395 288367 copper alloy button, embossed, military 20th century? Modern
6 645371 288438 flint burnt flint, pot boiler undated
7 645374 288433 flint burnt flint, pot boiler undated
8 645402 288400 pot black glazed earthenware 18th century PM
9 645342 288470 copper alloy rod 83mm long, flattened oval section, 4mm x 2mm - pin shaft? undated
10 645378 288486 copper alloy? circular disc, 122mm diameter, 4mm thick, ferrous staining, machinery part? late post-medieval? PM?
11 645407 288388 lead folded sheet, 4mm thick undated
12 645428 288383 lead sheet, 6mm thick undated

### POST ROMAN POTTERY
*By Alex Beeby*

**Introduction**
All the material was recorded at archive level in accordance with the guidelines laid out in Slowikowski *et al* (2001). A single sherd from one vessel, weighing eight grams was recovered from the site. The pottery codenames (Cname) are in accordance with the Post Roman pottery type series for Lincolnshire, as published in Young *et al.* (2005). A single sherds one vessel, weighing eight grams was recovered from the site.

**Methodology**
The material was laid out and viewed in context order. Sherds were counted and weighed by individual vessel within each context. The pottery was examined visually and using x20 magnification. This information was then added to an Access database. An archive list of the pottery is included in Table 1 below. The pottery dates to the post medieval period.

**Condition**
There is a single, relatively small sherd with an abraded external surface. The piece is a fieldwalking find.

**Results**

*Table 1, Post Roman Pottery Archive*

| Cxt | Cname | Full Name | Fabric | Form | NoS | NoV | W (g) | Part | Comment | Date |
|---|---|---|---|---|---|---|---|---|---|---|
| P8 | BL | Black Glazed Ware | Dark red | Jar or Jug | 1 | 1 | 8 | BS | Hard virtually vitrified; thick brownish – black gloss glaze; abraded | 17th-18th |

**Provenance**
The sherd was recovered during fieldwalking. It has been given plot number 8 and was recovered from near the centre of the walked area.

**Range**
There is a single fragment of Black or Iron glazed ware (BL). This pottery is found in this region from the 16th to 18th century with a wide range of variety in glaze finish and fabric colour (Jennings, 1981, 150). This piece is likely to date to the 17th or 18th century and probably derives from a jar or jug.

**Potential**
There is no potential for further work. The pottery can be discarded.

**Summary**
A single piece of pottery probably dating to the 17th or 18th century was recovered during fieldwalking.

**CERAMIC BUILDING MATERIAL**
*By Alex Beeby*

**Introduction**
All the material was recorded at archive level in accordance with the guidelines laid out by the ACBMG (2001). A total of two fragments of ceramic building material, weighing 40 grams was recovered from the site.

**Methodology**
The material was laid out and viewed in context order. Fragments were counted and weighed within each context. The ceramic building material was examined visually and using x20 magnification. This information was then added to an Access database. An archive list of the ceramic building material is included in Table 2 below.

**Condition**
The ceramic building material is fragmentary. One piece is also abraded.

**Results**
*Table 2, Ceramic Building Material Archive*

| Cxt | Cname | Full | Fabric | NoF | W | Description | Date |
|---|---|---|---|---|---|---|---|

| | | Name | | | (g) | | |
|---|---|---|---|---|---|---|---|
| 027 | PNR | Peg, Nib or Ridge Tile | Oxidised; medium-coarse sandy; flint; mica | 1 | 18 | Flatroofer | 13th-16th |
| 038 | PANT | Pantile | Reduced; medium sandy; Ca | 1 | 22 | Abraded; milky quartz; rare Ca grits | 17th-19th |

**Provenance**
A single fragment of ceramic building material was recovered from fill (027) within pond or marl pit [028] whilst a second is unstratified (038).

**Range**
There are two fragments of ceramic building material. These include a piece of medieval flat roofing peg or nib tile (PNR) from pond or pit [027] and an unstratified section of Pantile (PANT) of post medieval date. These are commonly found types in this area.

**Potential**
There is no potential for further work. The fragments can be discarded.

**Summary**
Two small pieces of ceramic building material were recovered during the evaluation. Only one piece was from a stratified context, this is medieval in date and was retrieved from pond or marl pit [028].

**FLINTS**
*By Tom Lane*

**Introduction**
Two contexts yielded burnt flints of the type often found in cooking pits or on so-called burnt mounds.

**Condition**
All flints are in good condition and require no conservation measures. All are fire cracked.

**Results**
*Table 3, Other Materials*

| Context | Description | NoF | W (g) | Date |
|---|---|---|---|---|
| 013 | Three fire crazed burnt natural flints | 3 | 32 | Prehistoric |
| 025 | Five fire crazed burnt natural flints | 5 | 90 | Prehistoric |

**Range**
All items are likely to be of prehistoric date.

**Potential**
The items have little potential for understanding the prehistoric archaeology of the area. They indicate a presence during that period in the Worlingham area but little else.

**Summary**
A number of unworked flints were found that had been heavily burnt. A few similar finds were made during the fieldwalking of the area.

**OTHER FINDS**
*By Gary Taylor*

**Introduction**
A single other find weighing 108g was recovered.

**Condition**
Although corroded the other item is in good condition.

**Results**
*Table 4, Other Materials*

| Cxt | Material | Description | NoF | W (g) | Date |
|---|---|---|---|---|---|
| 027 (P14) | Iron | Horseshoe, Clark's type 4 (probable), nails standing proud | 1 | 108 | 14th-15th century |

**Provenance**
The other find was recovered from the fill of a pond or marl pit (027).

**Range**
A single iron horseshoe was recovered. Just over a half of the shoe survived and there are two very prominent nails near the toe. The shoe appears to be an example of Clark's type 4, of late medieval date (Clark 2004, 88-90). Characteristics of this type, including the broad, web and branch tapering to the heel, are evident. However, the main feature of the type that distinguishes them from the others, the nail-holes and nails, are not clearly evident on the present example. Although this type of horseshoe has a fairly concise date range they are an artefact type that can exhibit significant residuality and redeposition, being cast from horse's hooves and remaining in the area almost indefinitely. As a consequence, although the shoe provides an earliest date for the deposit it was recovered from, the actual chronology of the context could be considerably later than the period of use of the shoe.

**Potential**
The other find is of limited potential, being part of a probable cast horseshoe of late medieval date. It does, however, provide an earliest date (*terminus post quem*) for the deposit it was recovered from.

**SPOT DATING**

The dating in Table 5 is based on the evidence provided by the finds detailed above.

*Table 5, Spot dates*

| Cxt | Date | Comments |
|---|---|---|
| 013 | prehistoric | Based on flints |
| 025 | prehistoric | Based on flints |
| 027 | 14th-15th century | Based on 1 metal; also yielded CBM dated 13th-16th |
| 038 | 17th-19th century | Based on 1 CBM; unstratified |

**ABBREVIATIONS**

ACBMG Archaeological Ceramic Building Materials Group
BS Body sherd
CBM Ceramic Building Material
CXT Context
NoF Number of Fragments
NoS Number of sherds
NoV Number of vessels
TR Trench
W (g) Weight (grams)

**REFERENCES**

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Young, J., Vince, A.G. and Nailor, V., 2005, *A Corpus of Saxon and Medieval Pottery from Lincoln* (Oxford)

## Appendix 4

## ENVIRONMENTAL EVIDENCE

*By James Rackham*

### *Introduction*

An evaluation excavation conducted by Archaeological Project Services revealed two small undated, possibly prehistoric, pits in Trench 18 from which two samples were collected in the hope that they might yield some useful data. These were submitted to the Environmental Archaeology Consultancy for processing and assessment.

*Table 1, Samples taken for environmental analysis*

| Sample no. | Context | Sample vol. (l) | Feaure | Date |
|---|---|---|---|---|
| 1 | 13 | 9 | Pit fill | Prehistoric? |
| 2 | 15 | 13 | Pit fill | Prehistoric? |

### *Methods*

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet sieve of 1mm mesh for the residue. Both residue and flot were dried and the residues subsequently re-floated to ensure the efficient recovery of charred material. The dry volume of the flots was measured and the volume and weight of the residue recorded.

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerscale and prill and a count made of the number of flakes or spheroids of hammerscale collected. The flot of each sample was studied using x30 magnifications and the presence of environmental finds (i.e. snails, charcoal, carbonised seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The flots were then bagged and along with the finds from the sorted residue, constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are summarised below in Tables 2-3.

### *Results*

Context 13, pit fill.

The nine litre sample washed down to a small residue (150ml) of flint, sediment concretions, a few small stones and pebbles and a little mineralized charcoal. Several of the small 'sediment concretions' may be degraded pottery sherds perhaps suggesting a prehistoric date, while a little fired earth and a few fragments of burnt flint were also present.

The flot included a little charcoal, including small twigs, but the only other finds apart from modern seeds were a few shells of *Carychium* sp. and *Vallonia* sp.. With a small bird pellet and a number of modern vetch seeds it is possible that the three or four snail shells might also be contaminants in the sample. No charred plant remains other than charcoal are present.

*Table 2: Finds from the processed samples (+ present)*

| Sample no. | Context | Sample vol. l. | Residue vol. (ml) | Pot no/wt (g) | Fired earth wt. g. | fire-crack'd flint | Magnetic wt. g. | Others |
|---|---|---|---|---|---|---|---|---|
| 1 | 13 | 9 | 150 | +? | 6.2 | + | 0.2 | |
| 2 | 15 | 13 | 285 | +? | 2.6 | + | 0.2 | |

Context 15, pit fill.
The 13 litre sample from this context washed down to a small residue of 285ml comprised of flint, occasional other small stone, sediment concretions and mineralized charcoal. As in sample 1 there are possible fragments of degraded pottery, with a little fired earth and a few fragments of heat effected flint.

The environmental remains are equally limited although this sample contains a much larger charcoal assemblage, much of it heavily mineralized, although several fragments should be identifiable to species. A single fragment of possible charred hazelnut shell is present. There were many fewer uncharred seeds in this sample.

*Table 3, Environmental finds from the processed samples*

| Sample no. | Context | sample vol. (l) | Flot vol. (ml) | Charcoal $ | Charred grain * | Chaff * | Charred seed * | Un-charred seed * | Snail | Comment |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13 | 9 | 2 | 2/2 | | | | 2 | 1 | Uncharred vetch seeds and shells of *Carychium* sp. and *Vallonia* sp.; 5ml charcoal sorted from residue |
| 2 | 15 | 13 | 10 | 3/4 | | | ? | 1 | | Uncharred vetch, poss charred hazel-nut shell fragment; 10ml charcoal sorted from residue |

*frequency 1=1-10; 2=11-50; 3=51-150; 4=151-250; 5=>250
$ frequency of charcoal >2mm/<2mm

***Discussion and recommendations***
The presence of heat effected flint, a little fired earth and charcoal in both samples, suggests burning in the near vicinity, and if the tentative identification of several crumbs or fragments of material as pottery is correct then this would suggest possible occupation or conceiveably cremations, although no burnt bone was recorded from the features or recovered from the samples. The lack of any charred plant macrofossil remains, other than the possible hazelnut shell, from samples of this size would not be unexpected in a prehistoric settlement context.

No further environmental study can be recommended on these samples although the radiocarbon dating of selected charcoal pieces, particularly from context 15, would afford a date for the features.

If future archaeological work is envisaged at the site it is likely that only charcoal, charred plant macrofossils and burnt bone will have survived in these soils, and given the low productivity of these two evaluation samples any samples collected should be of 40 litres.

*Acknowledgments*
I should like to thank Trude Maynard and Angela Bain for the sample processing and sorting.

*Bibliography*

Williams, D.1973 Flotation at Siraf, *Antiquity*, 47, 198-202

# Appendix 5

## GLOSSARY

| | |
|---|---|
| **Context** | An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, e.g. [004]. |
| **Cut** | A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, etc. Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded. |
| **Fill** | Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) that become contained by the 'cut' are referred to as its fill(s). |
| **Fieldwalking** | A technique to systematically sample the upper surface of cultivated or disturbed ground in an effort to locate or map the distribution and extent of archaeological sites through the collection of artefacts |
| **Layer** | A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut. |
| **Medieval** | The Middle Ages, dating from approximately AD 1066-1500. |
| **Natural** | Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity |
| **Post-medieval** | The period following the Middle Ages, dating from approximately AD 1500-1800. |
| **Prehistoric** | The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD. |
| **Roman, Romano-British** | Pertaining to the period dating from AD 43-410 when the Romans occupied Britain. |

# Appendix 6

## THE ARCHIVE

The archive consists of:

| | |
|---|---|
| 2 | Context register sheets |
| 38 | Context record sheets |
| 19 | Trench record sheets |
| 2 | Photographic record sheets |
| 1 | Plan record sheet |
| 1 | Section record sheet |
| 7 | Daily record sheets |
| 31 | Sheets of scale drawings |
| 1 | Sample register sheet |
| 2 | Sample record sheets |
| 6 | Bag of finds |
| 2 | Bagged soil samples |

All primary records are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

Suffolk County Council Archaeology Service

Suffolk Historic Environment Record Number: WGM014

Archaeological Project Services Site Code: WOCW 12

OASIS Record No: archaeol1-138413

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.