



Archaeological Field Unit

**An Archaeological Evaluation on Land  
at Former RAF Cardington, Bedfordshire**

Richard Mortimer & Claire Jacklin

October 2004

**Cambridgeshire County Council**

Report No. 765

*Commissioned by CPM Environmental Planning and Design;  
on behalf of Frontier Estates Ltd.*

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## SUMMARY

*In October 2004, the Archaeological Field Unit (AFU) of Cambridgeshire County Council conducted an archaeological evaluation on fifteen hectares of land at the former RAF Cardington, Shortstown, Bedfordshire (TL 0776 4678/TL 0840 4710). The investigation consisted of nineteen trenches totalling 1480m in length, located to both the east and west of the historic Grade II\* listed airship hangars.*

*In the Eastern Area three ditches were excavated in Trenches 11, 17 and 19, and discrete artefact scatters, independent from archaeological features, were recorded in Trenches 11, 12 and 17. Two of these ditches are broadly parallel and have been tentatively dated as prehistoric, whilst the third corresponds with a post-medieval enclosure ditch.*

*In the Western Area trenches revealed evidence of post-medieval agricultural activity in the form of ridge and furrow and a post-medieval field boundary. There was also a considerable amount of World War II intrusion across the site, but particularly to the west. These included Nissen Hut footings, a haul road, construction rubble and service trenches.*

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# Drawing Conventions

## Sections

Limit of Excavation 

Cut 

Cut - Conjectured 

Soil Horizon 

Soil Horizon - Conjectured 

Intrusion/Truncation 

Top of Natural 

Top Surface 

Break in Section 

Cut Number 

Deposit Number 117

Ordnance Datum  $\frac{18.45m}{\wedge}$  OD N

Environmental sample 

Stone Inclusion 

## Plans

Limit of Excavation 

Deposit - Conjectured 

Natural Features 

Intrusion/Truncation 

Sondages/Machine Strip 

Illustrated Section  S.14

Archaeological Deposit 

Excavated Slot 

Cut Number 118

**An Archaeological Evaluation on Land at the Former RAF Cardington,  
Bedfordshire.**

**TL 0776 4678/TL 0840 4710**

**1 INTRODUCTION**

In October 2004, the Archaeological Field Unit (AFU) of Cambridgeshire County Council conducted an archaeological evaluation on 15 hectares of land at the former RAF Cardington, Shortstown, Bedfordshire (TL 0776 4678/TL 0840 4710).

Bedfordshire County Council had requested the archaeological evaluation was carried out prior to the determination of the planning application.

The investigation consisted of nineteen trenches totalling 1480m in length (3108m<sup>2</sup>, just over 2% sample of the available area), located to both the east and west of the historic Grade II\* listed airship hangars. See Figure 1 for trench locations.

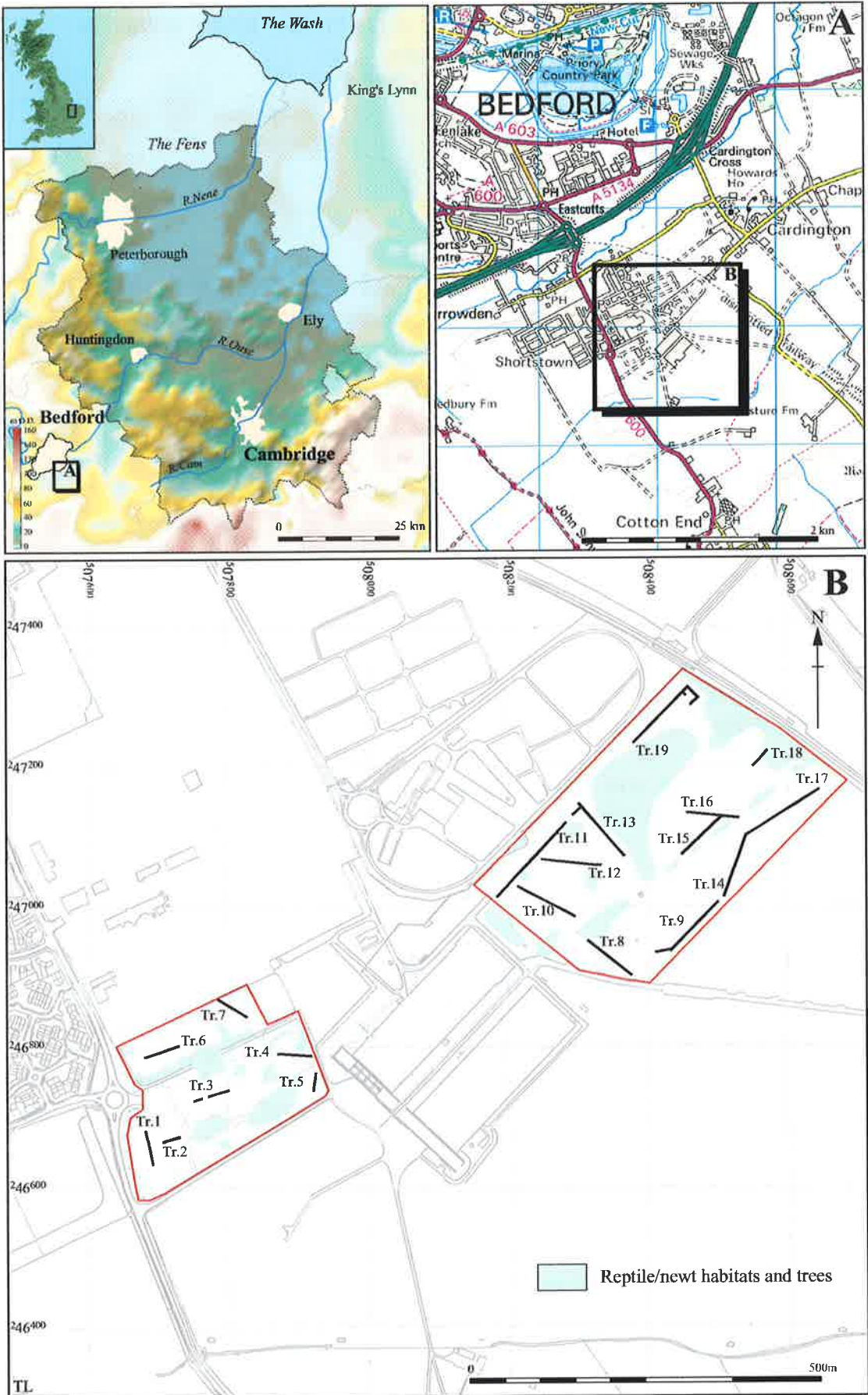
The land is split between two parishes; that of Eastcotts to the west, which contains the airship hangars, and Cardington to the east, covering the eastern part of the eastern field.

The evaluation was commissioned by CPM Environmental Planning and Design on behalf of Frontier Estates Ltd.

**2 GEOLOGY AND TOPOGRAPHY**

The area outlined for development is located within the grounds of former RAF Cardington, and as this land is a former military establishment the site was excluded from geological maps of the area, and prior to trenching the natural geology was unknown. Excavation revealed the underlying drift geology to comprise of Boulder Clay (BGS 204/203), capped immediately to the east of the hangars with silty gravel.

Two areas were evaluated, the western and eastern fields, separated by the airship hangars and their immediate surrounds. The western area, of approximately 3 hectares, slopes fairly evenly from 37.00m OD at the north-north-west to 31.00m at the south-south-east. The eastern area, of 12 hectares, slopes (quite steeply at first) from west to east and from 31.00m OD to 27.50m.



Based upon Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office Crown Copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. (Cambridgeshire County Council licence No. LA 07649X 2003)

**Figure 1** Location of trenches with the development areas outlined (red)

The terrain in the eastern area was largely overgrown with scrub, trees and bramble patches and contained large waterlogged areas and ponds. To the west were further ponds, quantities of rubble and areas of dense vegetation.

### **3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

The proposed development is located within an archaeologically sensitive area of the River Great Ouse valley. A number of cropmark sites are known in the vicinity (HER 1181, 1624, 10145, 16642, 16659, 16660), which probably represent areas of prehistoric and Roman activity, including double ditched trackways, small enclosures and ring ditches.

Fieldwalking in the parish of Eastcotts has potentially identified the location of Roman pottery kilns through the discovery of kiln bars and wasters (HER 3640).

Very little archaeological investigation has been undertaken within the immediate area of the proposed development. However, the excavation of a cable trench close to the western perimeter of the study area uncovered remains of Iron Age date. Oxford Archaeology have also carried out limited work during the summer of 2004, within the core of RAF Cardington to the north-west of the subject site. Post-excavation work is ongoing and little information is currently available. Preliminary results indicate that some areas are very disturbed, although a ditch of Roman date has been identified, apparently heading in the direction of the hangars (Lesley-Ann Mather, pers. comm.).

### **4 METHODOLOGY**

Bedfordshire County Council Archaeological Officer advised that the area considered for development lay within an archaeologically sensitive area. The Archaeological Officer issued a brief for a programme of archaeological investigation in July 2004 (Bedfordshire County Council 2004a). There are three stages to the programme. Stage 1 is an archaeological field evaluation, stage 2 is an appraisal of the results of the evaluation which may lead to a programme of investigation and recording. Stage 3 is the implementation of an agreed programme of archaeological investigation and recording based on a further brief from the Bedfordshire County Council Archaeological Officer.

The brief was accompanied by a brief for stage 1 – the field evaluation which outlined the level of trenching and method of investigation (Bedfordshire County Council 2004b).



In response to the brief Cambridgeshire County Council Archaeological Field Unit prepared a specification for the archaeological evaluation (Hinman, M. and Clarke, R., 2004). The specification set out the objectives of the evaluation and methodology with a programme and staffing.

The aim of the evaluation was to attempt to establish the character, date, state of preservation and extent of any archaeological remains within the proposed development area.

Nineteen trenches totalling 1480m in length (3108m<sup>2</sup>, just over 2% of the site) were excavated; seven to the west of the site, and twelve to the east (Figure 1). They were opened using a 360° mechanical excavator with a flat-bladed ditching bucket, under the constant supervision of an archaeologist. Consequently all trenches had a corresponding width of 2.10m. The machine continued to remove overburden and deposits until reaching the interface between the soil horizons and the natural geological layer, at which point the depth was maintained.

For the first two days of trenching the archaeologists were accompanied by an ecologist, Andy Johnson, who assisted in the observation of the machining and advised on faunal habitats. The trenches had been specifically placed in order to minimise disturbance to the sensitive habitats of Great Crested Newts (in the Western Area) and Common Lizards (in both Eastern and Western Areas), both of which are known to be present in large numbers on the site. Despite this preparation it was necessary to adjust the position and length of many of the trenches, particularly in the Western Area, to avoid scrub, trees, rubble and bramble patches (all winter habitats) and large waterlogged areas and ponds. All reptiles, amphibians and mammals found during trenching were removed to a place of safety (Appendix 3).

After machining, the trenches were cleaned in order to fully expose the archaeological features. All features were hand excavated and recorded using the AFU standard contextual recording system. The trenches were planned at a scale of 1:50 and sections were drawn at 1:10. Colour slide and monochrome photographs were taken as well as digital photographs using a Canon A60 Powershot Digital camera. The spoil heaps, features and trench surfaces were visually scanned for artefacts. The trench locations were surveyed using a Leica Total Station Theodolite and tied in to the Ordnance Survey grid. The individual trench plans showing feature locations were then incorporated with the surveying data.

For the purposes of this report, cut numbers will be represented in **bold** text, all other contexts will be in standard plain text.



*Plate 1 Trench 3 and hangars*

## 5 RESULTS

### 5.1 Trial Trenching

The natural geology consisted of three basic types; (A) a light, orangey sandy gravel, (B) a light brown to mid orange clay and (C) a blue boulder clay. The topsoil (57) consisted of a medium brown silty-soil, and was consistent throughout. The subsoil (58) was a light brown silty-clay, although this did fluctuate somewhat dependant upon the underlying natural geology, and variations will be specified in individual trench descriptions. Once the trenches had been fully assessed and the relevant work carried out within them, they were photographed and recorded in detail prior to being backfilled.

#### Trench Summary

Trench	Length (m)	Topsoil (max. depth in m)	Subsoil (max. depth in m)	Post-med. features	Med/Pre-med features	Modern intrusions
1	50.00	0.30	0.15	N	N	Y
2	25.00	0.40	0.30	Y	N	Y
3	50.00	0.30	0.45	N	N	Y
4	50.00	0.33	0.28	N	N	Y
5	26.00	0.20	0.32	N	N	Y
6	55.00	0.40	0.36	Y	N	Y

7	48.00	0.32	0.42	N	N	Y
8	79.60	0.38	0.30	N	N	N
9	120.40	0.40	0.35	N	N	Y
10	97.60	0.36	0.25	N	N	Y
11	143.90	0.30	0.38	N	Y	Y
12	84.40	0.32	0.29	N	N	Y
13	116.10	0.32	0.25	N	N	Y
14	94.50	0.33	0.39	N	N	Y
15	77.00	0.33	0.17	N	N	Y
16	73.00	0.32	0.36	N	N	Y
17	120.30	0.33	0.40	Y	N	Y
18	30.50	0.41	0.31	N	N	Y
19	134.50	0.38	0.31	N	Y	Y

## 5.2 The Western Field

### *Trench 1*

Trench 1 was situated to the west of the hangars, and was aligned north to south. It measured 50m long and was excavated to a depth of 0.37m at the northern end, 0.45m towards the south. The underlying natural geology contained some variation, and was a combination of types A and B. The topsoil in this trench measured *c.*0.30m deep, and the subsoil *c.*0.15m. Whilst the trench did contain several modern intrusions no pre-modern archaeological features were recorded.

### *Trench 2*

Trench 2 was situated approximately 300 metres to the west of the hangars, and was aligned east to west. It measured 25m long and was excavated to a depth of 0.70m to the eastern end and 0.50m to the west. The natural geology in this trench was type B. The topsoil was 0.40m deep to the east, and 0.20m to the west. The subsoil measured 0.30m deep throughout. Modern intrusions were evident, as was agricultural activity and a furrow (27) was excavated. No pre-modern archaeological features were recorded.

### *Trench 3*

Trench 3 was situated approximately 200 metres west of the hangars, and was aligned north-east to south-west. It measured 50m long and was excavated to a depth of 0.50m at the western end and 0.75m to the east. The natural geology was type B. A modern, compacted brick, haul road ran nearly the length of the trench. After opening 30m of the trench it became apparent that the voids in the brick rubble were being used by hibernating lizards and it was necessary to raise the level of excavation for eight metres before resuming again. At the south-western end of the trench the topsoil measured 0.30m deep. The subsoil had a maximum depth of 0.45m. No pre-modern archaeological features were recorded.

### *Trench 4*

Trench 4 was situated approximately 40 metres from the hangars and was aligned east to west. It measured 50m long and was excavated to a depth of 0.43m at the eastern end and 0.61m at the west. The natural geology was type B. The topsoil was *c.* 0.33m deep, and the subsoil measured 0.11m at the

eastern end, and 0.28m to the west. Evidence of agricultural activity was apparent, and modern intrusions were also evident. No pre-modern archaeological features were recorded.

#### *Trench 5*

Trench 5 was situated approximately 40 metres to the west of the hangars, and was aligned north-north-east to south-south-west. It measured 26m long and was excavated to a depth of 0.68m to the north-eastern end of the trench and 0.37m at the south-west. The natural geology was type B, mottled with patches of bright orange sand. The topsoil measured *c.*0.20m, and the subsoil had a maximum depth of 0.32m. A twentieth century demolition layer extended for a further 0.15m below the subsoil at the north-eastern end of the trench. Modern intrusions were evident, but no pre-modern archaeological features were recorded.

#### *Trench 6*

Trench 6 was situated approximately 300 metres north-west of the hangars and was aligned east to west. It measured 55m long and was excavated to a depth of 0.76m at the western end of the trench and 0.66m to the east. The topsoil had a maximum depth of 0.40m and the subsoil was 0.36m deep. The natural geology was type B. Modern intrusions were clearly evident, as was agricultural activity, and a furrow (23) was excavated. No pre-modern archaeological features were recorded.

#### *Trench 7*

Trench 7 was situated approximately 200 metres north-west of the hangars, and was aligned north-west to south-east. It measured 48m long and was excavated to a depth of 0.64m to the north-west end of the trench, rising to 0.58m at the south-east. The topsoil had a maximum depth of 0.32m, the subsoil of 0.42m. The natural geology was type B. While modern intrusions were evident no pre-modern archaeological features were recorded.

### 5.3 **The Eastern Field** (Figure 2)

#### *Trench 8*

Trench 8 was situated approximately 200 metres to the north-east of the hangars. It was aligned north-west to south-east, measured 79.60m long and was excavated to a depth of 0.50m at the north-westernmost end, and 0.68m towards the south-east. The topsoil was 0.30m deep at the north-western end, and 0.38 to the south-east, where it also became darker and rich in organic matter. The subsoil layer was 0.20m deep at the north-west and 0.30m to the south-east. The natural geology was type C. No pre-modern archaeological features were recorded, and water began to saturate the trench almost immediately.

#### *Trench 9*

Trench 9 was situated to the south-east of the hangars, and was aligned north-east to south-west. It measured 97.50m long and was excavated to a

maximum depth of 0.75m. An extension of 22.90m was later added at the southern end of the trench, bearing south-west. The topsoil was 0.30m deep, 0.40m at the south-western end. The subsoil was 0.10m deep, although this increased to 0.35m towards the south-west. At the north-eastern end of the trench the soil was disturbed, and modern intrusions were apparent. The natural geology was type B. While modern intrusions were evident no pre-modern archaeological features were recorded, and water began to saturate the trench immediately.

#### *Trench 10*

Trench 10 was situated approximately 200 metres to the east of the hangars, and was aligned north-west to south-east. It measured 97.60m long and was excavated to a maximum depth of 0.59m. The topsoil was 0.36m deep, and the subsoil had a maximum depth of 0.25m. At approximately 45m there was a layer of modern building disturbance situated between the topsoil and the subsoil, which had a maximum depth of 0.10m. The natural geology was type B, mixed with patches of boulder clay. While modern intrusions were evident no pre-modern archaeological features were recorded.

#### *Trench 11*

Trench 11 was situated approximately 100 metres to the north-east of the hangars and was aligned north-east to south-west. It initially measured 96.40m long and was excavated to a maximum depth of 0.75m. The topsoil had a maximum depth of 0.30m. Between the south-western end and the midpoint the subsoil was 0.38m deep. There was disturbance towards the north-east with a layer of modern building rubble 0.25m deep at the interface between the topsoil and subsoil. Here the subsoil was 0.20m deep. The excavation level rose between 16m and 30m to take in a mid-brown sandy gravel subsoil in which a small scatter of archaeological finds (67) was recovered. The natural geology was type B. One archaeological feature (49) was recorded; a ditch aligned north-west to south-east (Figures 2 & 3.1). The trench was subsequently extended by 47.50m to the north-east, although no further archaeological features were recorded. Modern intrusions were evident throughout the length of the trench.

#### *Trench 12*

Trench 12 was situated approximately 150 metres to the north-east of the hangars, and was aligned east to west. It measured 84.40m long, and was excavated to a depth of 0.31m at the western end, and 0.61m at the east. The topsoil was 0.20m deep towards the west end of the trench and 0.32m at the east. The subsoil had a maximum depth of 0.29m. A small artefact scatter (66) was recovered in patches of subsoil deposited in natural hollows and undulations in the natural geology. The natural layer was type B. While modern intrusions were evident no pre-modern archaeological features were recorded.

#### *Trench 13*

Trench 13 was situated approximately 400 metres north-east of the hangars, and was aligned north-west to south-east. The trench initially measured

99.60m long, with a subsequent extension of 16.50m at the western end. The trench was excavated to a maximum depth of 0.71m. The natural geology changed from type B in the north-western two thirds of the trench, to type C in the south-east. The topsoil had a minimum depth of 0.16m at the north-west end of the trench increasing to 0.32m at the south-east. The subsoil was 0.25m deep at the north-western end of the trench, decreasing to 0.10m at the south-east. In the southern half of the trench a lower subsoil layer, 0.32m deep, was recorded. While modern intrusions were evident throughout the length of the trench, no pre-modern archaeological features were recorded.

#### *Trench 14*

Trench 14 was situated to the east of the southernmost hangar, to the north of Trench 9. It was aligned north to south, measured 94.50m in length and was excavated to a maximum depth of 0.72m. The topsoil had a maximum depth of 0.33m. The subsoil layer varied in depth from 0.28m at the south, to 0.15m in the centre and 0.39m at the northern end of the trench. The natural geology was type C. While modern intrusions were evident no pre-modern archaeological features were recorded. Water filled the trench almost immediately.

#### *Trench 15*

Trench 15 was situated approximately 400 metres to the east of the hangars, and was aligned north-east to south-west, branching from Trench 16. It measured 77m in length and was excavated to a maximum depth of 0.51m. The topsoil increased in depth from 0.18m to 0.33m towards the south-west. Whilst the subsoil averaged 0.15m deep, there was a lower clay subsoil layer at the north-eastern end, 0.16m deep. The natural geology was type B. While modern intrusions were evident no pre-modern archaeological features were recorded.

#### *Trench 16*

Trench 16 was situated approximately 400 metres to the east of the hangars, and was aligned east to west. It measured 73m in length and was excavated to a maximum depth of 0.66m. The topsoil had a maximum depth of 0.32m. The depth of subsoil increased from 0.10m at the eastern end of the trench to 0.36m deep at the west. The natural geology was type B. While modern intrusions were evident no archaeological features were recorded.

#### *Trench 17*

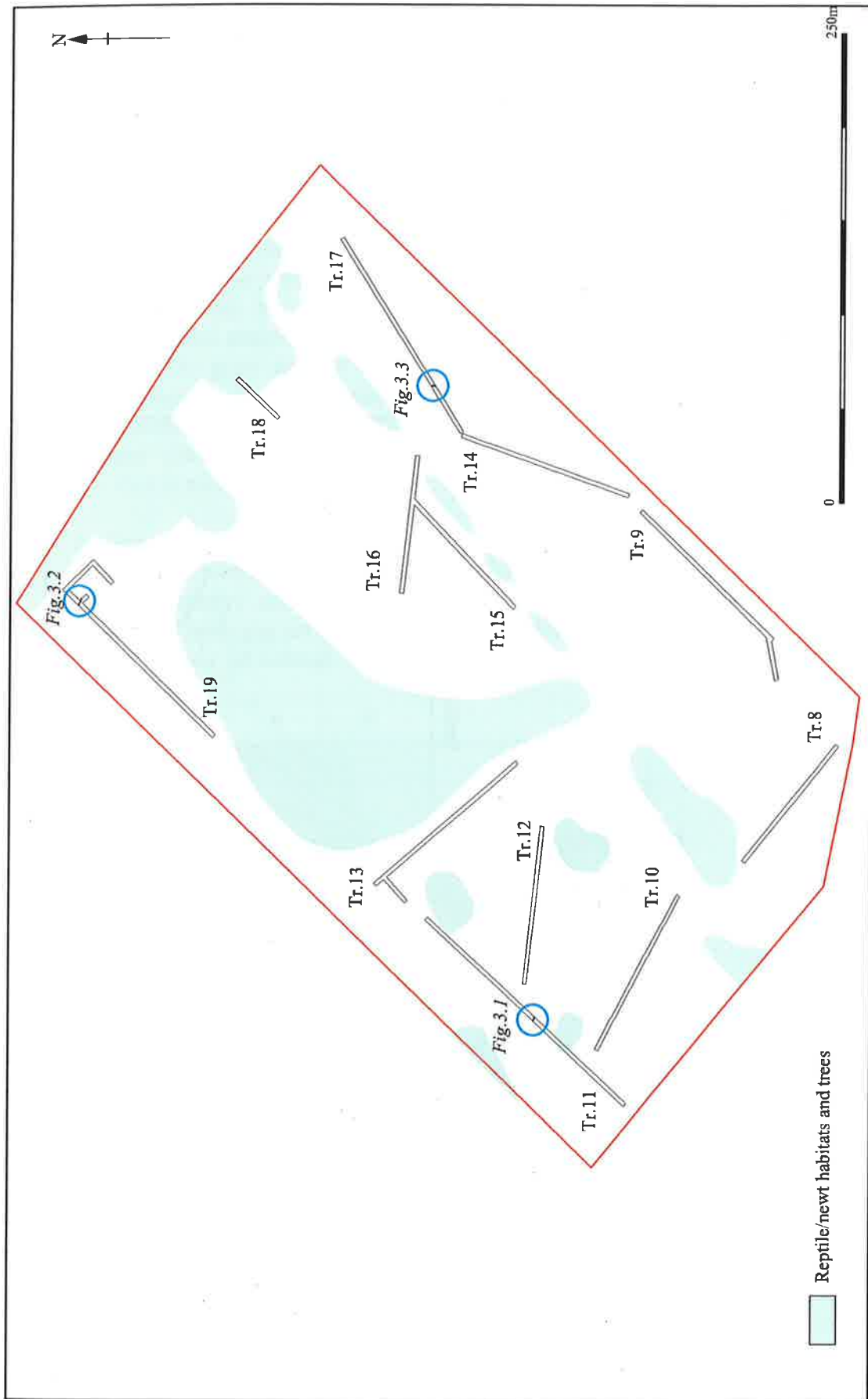
Trench 17 was situated to the east of the southernmost hangar, east of Trench 14. It was aligned north-east to south-west, measured 120.30m in length and was excavated to a maximum depth of 0.70m. The topsoil had a maximum depth of 0.33m. The subsoil varied in depth from 0.36m at the south-west, to 0.40m at the centre, and 0.24m deep at the north-eastern end of the trench. The natural geology was type B. Modern intrusions were evident, and archaeological feature 52 was excavated and recorded (Figures 2 & 3.3). This was a ditch running north-north-west to south-south-east.

### *Trench 18*

Trench 18 was situated between Trenches 17 and 19. It was aligned north-east to south-west, measured 30.50m in length and was excavated to a maximum depth of 0.72m. The topsoil was 0.41m deep and the subsoil had a maximum depth of 0.31m. The natural geology was type C. While modern intrusions were evident no pre-modern archaeological features were recorded. The trench became flooded almost immediately and was discontinued.

### *Trench 19*

Trench 19 was situated in the far north-western area of the site, and was aligned north-east to south-west. It initially measured 100.50m in length and was excavated to a maximum depth of 0.80m. Recent building activity involving the raising and levelling of the ground was evident. The topsoil and subsoil were respectively 0.38m and 0.31m deep to the west, but the soils were greatly disturbed throughout the remainder of this trench. Slightly further to the north-east the topsoil had been re-deposited and overlay three modern buried, upcast soil layers up to 0.50m deep. The natural geology was mixed but broadly corresponds to type A. Modern intrusions were evident, and archaeological feature (47), a ditch running west-north-west to east-south-east was excavated and recorded (Figures 2 & 3.2). The trench was later extended by 34m to the northeast and south with the intention of further tracing ditch (47), however, the ditch did not continue into the trench extension and was subsequently examined further in a short extension to the original trench, where a small flint scraper (39) was recovered from its surface.



*Figure 2 The Eastern Field - surviving archaeological features.*



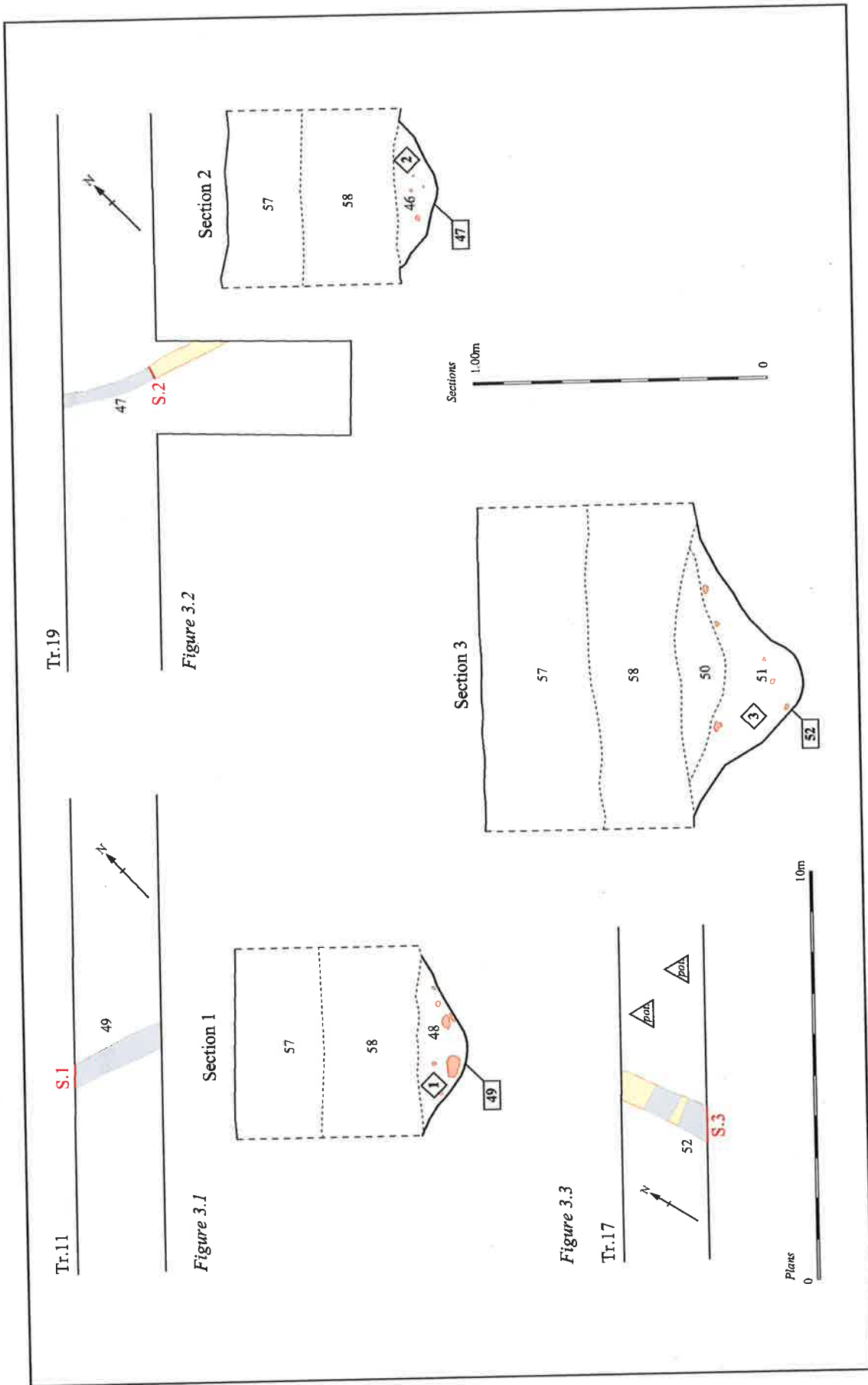


Figure 3 Feature plans and sections

## 5.2 Archaeological Features and Finds

### 5.2.1 Trench 11

In Trench 11 a shallow ditch (49) was excavated (Plate 2). The ditch was aligned west-north-west to east-south-east and was 0.57m wide with a maximum depth of 0.16m. It had gently sloping sides, an abrupt break of slope and formed a round based, wide V shape in profile (Section 1, figure 3). (49) had a single orangey mid brown fill (48), which consisted of compact clayey silt. Two sherds of prehistoric pottery and a single flint flake were recovered from the feature, and a 20 litre sample was removed for environmental analysis. This analysis revealed three full and one partial cereal grains. The grain appears to be barley, but may be an early form of wheat (emmer/spelt). There was also an unidentified weed seed present (R. Fosberry pers. comm.). A single piece of flint debitage was also recovered from this sample. The entire length of the ditch within the trench was excavated - c.2.30m in total.

A discrete artefact scatter (67) was also recorded in Trench 11. The scatter consisted of two sherds of prehistoric pottery, one fragment of ceramic (fired clay or pottery) and one sherd of medieval pottery. The finds were not associated with any archaeological features, but were residual within subsoil or in patches of subsoil that had become trapped in natural hollows and undulations.



*Plate 2 Trench 2, ditch 49*

### *Trench 12*

A second discrete artefact scatter (66) was recorded in Trench 12, 70m due east of scatter 67. This small scatter consisted of four fragments of prehistoric pottery, one fragment of fired clay, one worked flint (a shattered later Neolithic core, possibly re-used as a scraper; B. Bishop pers. comm.), a piece of burnt stone and one sherd of medieval pottery. These seven artefacts were not associated with archaeological features, but were residual within the subsoil or sealed within patches of subsoil in natural hollows and undulations in the geological base layer.

### *Trench 19*

At the eastern limit of the site Trench 19 contained a single ditch (47) (Plate 2). This ditch had a maximum depth of 0.20m and was 0.30m wide. It had a U shaped profile with an irregular base, steep sides and a gradual to sharp break of slope (Section 2, figure 3). The ditch was aligned west-north-west to east-south-east, parallel to ditch (49) in Trench 11. It contained a single fill (46), a light grey brown silty clay with orange flecks. A single piece of prehistoric pottery was recovered, and a 20 litre sample was removed for environmental analysis. The residue from this sample contained a second small piece of prehistoric pottery, although the flint was found to be sterile. A small Bronze Age flint scraper was also recovered from the ditch surface. The entire length of the ditch within the initial trench was excavated, c. 2.30m in total.



*Plate 3 Ditch 49*

In the trenches situated in the western part of the site medieval/post-medieval agricultural activity was evident in the form of broad plough furrows.

#### *Trench 2*

A 1m slot was excavated through feature (27) showing it to be a post-medieval, agricultural furrow. It had a maximum depth of 0.45m and a width of 2.45m. It had a very wide U shaped profile with a flat base, gentle sides and a gradual break of slope. The furrow was aligned north-west to south-east and contained a single light yellowish brown fill (26), which consisted of compact silty clay. Fragments of both pottery and glass were recovered from the fill (the latter was modern, sharp and discarded).

#### *Trench 6*

A second furrow (23) was excavated in this trench. It had a maximum depth of 0.07m and was 0.70m wide, suggesting that only the base of the feature survived. It was concave with a flat base, and formed a very wide U shape in profile. It contained a single brownish yellow fill, which consisted of a moderately compact silty clay. It was also aligned north-west to south-east and contained a fragment of brick. Further furrow traces were evident in Trench 4.

#### *Trench 17*

Trench 17 contained a single archaeological feature (52), a linear ditch aligned north-north-west to south-south-east with a maximum depth of 0.56m and a width of 0.79m. A single half metre wide section was excavated through the feature. The ditch had a flat-based U shaped profile (Section 3, figure 3) and contained two fills; the primary (51) consisted of an orangey dark brown, moderately compact, silty clay with a sharp lower horizon boundary. No finds were recovered, although a 20 litre sample was removed for environmental analysis, which later proved to be sterile. The upper fill (50) was a brownish, dark orange compact clay with occasional charcoal flecking, and also showed a sharp lower horizon boundary.

A small artefact scatter was also recovered in Trench 17. The finds were not associated with archaeological features, but were again found in patches of subsoil within hollows and above the pits of tree throws. This small scatter consisted of two pieces of possibly medieval pottery (65).

### 5.2.2 Modern Features

Trenches 3, 4, 6, and 7 each contained clusters of regularly spaced wooden blocks c.0.30m long and 0.15m wide, which were associated with Nissen Hut construction (Alex Travell of Advanced Technologies Group, pers. comm.).

Modern field drains appeared at regularly spaced intervals in every trench. These were located on a variety of alignments and occurred with increasing regularity in the eastern area of the site. Frequently three, four or five drains

had been recut along the same line, forming broad swathes of modern truncation.

Trenches 1, 3, 4, 5, 6, 7, 9, 10, 11, 12, 14, 16, 17, 19 all contained *in situ* post-World War II construction remains, rubble and services.

## 6 DISCUSSION

Only three archaeological features were recorded over the fifteen hectares of the site (excluding natural features, Medieval/post-medieval furrows and modern intrusions).

The two ditched features, (49) and (47) are broadly parallel, 300 metres apart and aligned west-north-west to east-south-east. Both are narrow and shallow with U shaped profiles, and both produced small artefact assemblages; surprising considering the apparent lack of associated activity. Both ditches produced worked flint loosely datable to the late Neolithic or Bronze Age, and ambiguous (small and abraded sherds) but broadly prehistoric pottery assemblages.

The overall, admittedly small, finds assemblage from these features suggests a Middle to Late Bronze Age date, or later. The finds assemblage is limited and the condition of the artefacts ranges from very degraded (one of the sherds in ditch 49 and those in ditch 47), to fresh (the flint flake in ditch 49). The available finds information (artefact types, dating, condition) is insufficient to assign an unambiguous date to the ditches and consideration should be given to the periods to which they may belong.

The form and alignment of the ditches would fit with that of known Bronze Age field systems within Bedfordshire. An extensive field system, dated to 1500-1200 BC, has recently been recorded to the west of Biggleswade at Broom Quarry (Mortimer 1997 & 2002). Of this coaxial system, one axis is aligned north-west to south-east; broadly parallel to the ditches at Cardington. While the Broom system is extensive it is not consistent in its layout; there are large 'gaps' in it and it would be possible to see an area this size (the eastern field at Cardington covers 12 hectares) containing just two, or even fewer ditches. If the ditches formed part of a Bronze Age field system, they may be the 'tail end' of a system that is more extensive over the gravels to the north.

Oxford Archaeology have recently recorded a single, Romano-British ditch immediately to the north-west, 'heading towards the site' (Leslie-Ann Mather pers. comm.). This ditch may prove to be on the same alignment as the two recorded here, it may even correspond with western ditch 49. While there were no clearly identifiable Romano-British period finds on the Cardington site, the ditches could clearly be (again) the 'tail end' of a much more extensive Romano-British system to the north. At the furthest remove from any

settlement this lack of finds material could be expected – it is likely that these wet claylands would have been utilized as pasture and therefore, as they were not ploughed, there would be no manuring to introduce contemporary artefacts into the soil. This argument could also be used to suggest the possibility that the ditches form part of an Iron Age system – the finds within the ditches being residual and relating to earlier transitory activities.

The other possible date for the ditches is early medieval; perhaps Middle or Late Saxon. They may relate to the deserted medieval village at Harrowden. Again they would be outliers, far from the settlement core and perhaps forming small boundary features within the pastureland. Their alignment, however, could be of significance. There is thought to be a post-Roman/early medieval drove or roadway linking Bedford to Biggleswade via Old Warden on the ridge between the Ouse and Ivel valleys (Mortimer & McFadyen 1999). Whilst the line of this can be traced along its eastern section, from Biggleswade to Old Warden, it is not clear along the western, down to the River Ouse at Bedford. The road would have had to have run somewhere between Cardington village and Harrowden, and on roughly the same alignment as the ditches recorded in this evaluation. It is possible that one of the parallel ditches on this site forms one side of this roadway; the ditches which bound the road to the west of Biggleswade are neither large nor deep, and exhibit similar U shaped profiles (*ibid*). Equally, the ditches could represent field boundaries to either side of the roadway, as it would have dictated the field patterns and alignments around it as it ran through settled areas.

The third ditch recorded, (52) in Trench 17, is the easiest to date. It is aligned north-north-east to south-south-west - the same alignment as the post-medieval field systems in this region. When compared and overlaid with the 1892 First Edition Ordnance Survey Map, the ditch corresponds exactly with a post-medieval field boundary, presumably dating to the period of Enclosure.

The two post-medieval agricultural furrows (27) and (23) in Trenches 2 and 6 in the western area of the site also follow the alignment of the post-medieval field systems documented on the 1892 map. The terrain would have influenced the orientation of the ridge and furrow, as, due to the character of the natural clay geology, drainage would have been an issue. By orienting the ridge and furrow north-west to south-east, down the slope, the furrows would have acted as drainage in what is clearly, albeit perhaps only seasonally, a very wet area.

The clusters of regularly spaced wooden blocks found in Trenches 3, 4, 6, and 7, are associated with Nissen hut construction (Alex Travell of Advanced Technologies Group, pers. comm.). Nissen huts consisted of wooden decking and panels resting upon a frame, whilst the roof and sides were constructed from corrugated metal. Curved steel ribs supported the structure, and the interior was lined with sheets of insulation board. It seems likely that the regular wooden blocks formed part of the footings for these structures.

## 7 CONCLUSIONS

The archaeological evaluation was carried out in response to Bedfordshire County Council Archaeological Officer who advised that the area considered for development lay within an archaeologically sensitive area. The evaluation was completed in advance of the determination of a planning application in accordance with a brief for a programme of archaeological work prepared by Bedfordshire County Council 2004.

The evaluation has completed Stage 1 of the brief. The following stages 2 and 3 are to be agreed with the Bedfordshire County Council Archaeological Officer.

The evaluation at Cardington has produced very limited archaeological evidence for activities or occupation. As a background scatter, pre-modern cultural material is virtually non-existent; the land was probably always utilized as pasture. Even transitory prehistoric activity is largely missing, only three struck flints and a few degraded pottery sherds were recovered despite an intensive search within the topsoil and subsoil removed from the trenches.

Of the three archaeological features (excluding furrows) that were recorded, one is of post-medieval date, relating to the period of Enclosure, and two are of uncertain date. Due to the small size of the finds assemblage, the uncertainty surrounding these conclusions must be stressed, but of the three most likely options outlined above, the first is perhaps the most likely; that the ditches form part of a Bronze Age field system. Neither of the other possibilities can, however, be dismissed.

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## Appendix 1: Context List

CONTEXT NUMBER	MASTER NUMBER	TRENCH	DESCRIPTION	PLAN NUMBER
1		1	General trench number	1
2		2	General trench number	2
3		3	General trench number	3
4		4	General trench number	4
5		5	General trench number	5
6		6	General trench number	6
7		7	General trench number	7
8		8	General trench number	8
9		9	General trench number	9
10		10	General trench number	10
11		11	General trench number	11
12		12	General trench number	12
13		13	General trench number	13
14		14	General trench number	14
15		15	General trench number	15
16		16	General trench number	16
17		17	General trench number	17
18		18	General trench number	18
19		19	General trench number	19
20	21	1	Fill of shallow, modern ditch	1
21	21	1	Cut of shallow, modern ditch	1
22	23	6	Brownish yellow fill of [23]	6
23	23	6	Cut of furrow	6
24		2	Topsoil in Trench 2	2
25		2	Subsoil in Trench 2	2
26	27	2	Yellowish light brown fill of [27]	2
27	27	2	Cut of furrow	2
28	66	12	Subsoil find – ceramic	12
29	66	12	Subsoil find – ceramic	12
30	66	12	Subsoil find – ceramic	12
31	66	12	Subsoil find – ceramic	12
32	66	12	Subsoil find – stone	12
33	66	12	Subsoil find – flint	12
34	66	12	Subsoil find – ceramic	12
35	66	12	Subsoil find – ceramic	12
36	67	11	Subsoil find – ceramic	11
37	67	11	Subsoil find – ceramic	11
38	67	11	Subsoil find – ceramic	11
39	47	19	Subsoil find – flint scraper	19
40	67	11	Subsoil find – ceramic	11
41	67	11	Subsoil find – ceramic	11
46	47	19	Light grey brown silty fill of [47]	19
47	47	19	Cut of ditch	19
48	48	12	Orangey mid brown fill of [48]	12
49	48	12	Cut of ditch	12
50	52	17	Brownish dark orange fill of [52]	17
51	52	17	Orangey dark brown fill of [52]	17
52	52	17	Cut of ditch (Post-Med. field boundary)	17
53	54	17	Dark silty fill of [54]	17
54	54	17	Tree root disturbance	17
55	56	17	Fill of [56]	17
56	56	17	Cut of tree throw	17
57		1-19	General Topsoil number	
58		1-19	General Subsoil number	
59	60	17	Silty fill of [60]	17
60	60	17	Cut of tree root	17
61	62	17	Fill of [62]	17
62	62	17	Cut of glacial/natural feature	17

63		5	Subsoil in Trench 5 (finds)	5
64		2	Subsoil in Trench 2 (finds)	2
65		17	Subsoil in Trench 17 (finds)	17
66		12	Master number for scatter of finds (28-35)	
67		11	Master number for scatter of finds (36-38, 40,41)	

## Appendix 2: Finds Assemblage

Context No.	Master/Cut No.	Feature Type	Pottery	Fired Clay	CBM	Burnt Stone	Shell	Struck Flint	Weight (grams)	Comments	Date
20					1				1	Fragment of brick	Post-Med/Modern
22	23	Furrow			1				9	Soft orange brick fragment	Med/Post-Med
26	27	Furrow	1						10	Glazed Red Earthenware	Post-Medieval
28	66	Subsoil		1					15	Hard, shell tempered dark grey fabric	Pre-Modern
29	66	Subsoil	2						5	1 hard, dark, possibly shell-tempered, 1 fine dark sand-tempered.	Prehistoric
30	66	Subsoil	1						0.5	Hard grey, burnt flint-tempered.	Prehistoric
31	66	Subsoil	1						2	Hard grey, burnt flint-tempered.	Prehistoric
32	66	Subsoil				1			93	Burnt Sandstone	
33	66	Subsoil						1	26	Shattered core, possible re-use as scraper	Neo/Bronze Age
34	66	Subsoil		1					1	Hard orange sand tempered.	Pre-Modern
35	66	Subsoil	1						10	Very hard, dark, sandy fabric	Medieval
36	67	Subsoil	1						4	Sandy grey fabric. Body sherd.	Bronze Age
37	67	Subsoil	1						2	Hard grey, burnt flint-tempered.	Prehistoric
38	67	Subsoil		1					2	Soft, pale brown ceramic fragment - could be pottery?	Pre-modern
39	47	Ditch						1	11	Small scraper	Earlier Bronze Age
40	67	Subsoil	1						8	Hard, dense, dark fabric - possible abraded base sherd.	Prehistoric
41	67	Subsoil			1				7	Small brick fragment	Post-Medieval
46	47	Ditch	2						4.5	1 hard brown burnt flint-tempered body sherd, 1 piece hard, black, burnt prehistoric (?)	Neolithic?/prehistoric
48	49	Ditch					1		3	Flake	Neo/Bronze Age
48	49	Ditch	2						25	1 large body sherd, 1 possible rim sherd, hard, fine possibly grog and shell tempered.	Pre-Roman
48	49	Ditch						1	0.5	1 tiny piece of debitage	Neo/Bronze Age
63			1						5	Body sherd, hard sandy grey ware.	Medieval
64							1		17	Oyster	Post-Medieval
64					2				267	1 roof tile, 1 brick, hard orange fabric.	Post-Medieval
64			3						112	2 Glazed Red Earthenwares, 1 stoneware base/rim of shallow bowl	Post Medieval
65A	65		2						7	1 very small, fine, squared rim in a dark grey-brown sandy fabric. Wheel turned (or finished). 1 soft leached-shell tempered body sherd.	?Medieval
65B	65		1						5	Very small, fine, squared rim in a dark grey-brown sandy fabric. Wheel turned (or finished).	?Medieval

### Appendix 3: Fauna

Part of the brief for the evaluation was to avoid, as much as possible, damage to the winter habitats of the amphibians, reptiles and mammals on the site, with particular care being taken to avoid disturbance of the Great Crested Newts and Common Lizards. The table below quantifies the animals removed from harm by ecologist Andy Johnson and the archaeological team during the machine trenching.

Common Toad	8
Common Lizard	7
Common Frog	1
Smooth Newt	1
Short-tailed field vole	1
Pygmy Shrew	1



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