

# Lady Fen Welney Norfolk



## Archaeological Evaluation Report



May 2008

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NGR: TL 552 945



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# Lady Fen, Welney Norfolk

NGR TL 552 945

## ARCHAEOLOGICAL EVALUATION REPORT

### CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	LOCATION AND SCOPE OF WORK.....	1
1.2	THE SCHEME.....	1
1.3	GEOLOGY AND TOPOGRAPHY .....	1
1.4	ARCHAEOLOGICAL BACKGROUND .....	2
<b>2</b>	<b>EVALUATION AIMS .....</b>	<b>2</b>
<b>3</b>	<b>EVALUATION METHODOLOGY.....</b>	<b>2</b>
3.2	FIELDWORK METHODS AND RECORDING.....	3
3.3	SERVICE LOCATION.....	3
3.4	EXCAVATION.....	3
3.5	RECORDING.....	3
3.6	FINDS .....	4
3.7	PRESENTATION OF RESULTS.....	4
<b>4</b>	<b>RESULTS: GENERAL .....</b>	<b>4</b>
4.1	SOILS AND GROUND CONDITIONS.....	4
4.2	DISTRIBUTION OF ARCHAEOLOGICAL DEPOSITS .....	4
<b>5</b>	<b>RESULTS: DESCRIPTIONS .....</b>	<b>5</b>
5.1	DESCRIPTION OF DEPOSITS .....	5
<b>6</b>	<b>DISCUSSION AND INTERPRETATION .....</b>	<b>6</b>
6.1	RELIABILITY OF FIELD INVESTIGATION.....	6
6.2	OVERALL INTERPRETATION .....	6
	<b>APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY .....</b>	<b>8</b>
	<b>APPENDIX 2 BIBLIOGRAPHY AND REFERENCES .....</b>	<b>11</b>
	<b>APPENDIX 3 SUMMARY OF SITE DETAILS.....</b>	<b>12</b>

### LIST OF FIGURES

- Fig. 1 Site location  
 Fig. 2 Trench location and known archaeology  
 Fig. 3 Selected trench plans  
 Fig. 4 Selected sections

## Summary

*In January 2008, Oxford Archaeology carried out a field evaluation adjacent to the Wildfowl and Wetlands Trust reserve at Lady Fen, Welney, Norfolk on behalf of the Environment Agency. Eighteen trenches were excavated across the site.*

*A number of possible pits were recorded but no dating evidence was recovered. In addition, several trenches contained the remains of drainage ditches. These are likely to be the remains of ditches dug out in the 17th century in order to drain the fens for agricultural use.*

## 1 INTRODUCTION

### 1.1 Location and scope of work

1.1.1 Between 28th January and 5th February 2008, Oxford Archaeology (OA) carried out a field evaluation at Lady Fen, Welney on behalf of the Environment Agency, who commissioned the evaluation as good standard practice, prior to an extension of the Wildfowl and Wetland Trust at Welney. Prior to the commencement of the evaluation, a project design was submitted to, and approved by, Ken Hamilton, Head of Archaeological Planning at Norfolk Landscape Archaeology. The development site is situated at NGR TL 552 945 (Figure 1) and is 20 hectares in area.

### 1.2 The Scheme

1.2.1 The proposed development, to be carried out by the Wildfowl and Wetlands Trust in partnership with the Environment Agency, comprises the creation of at least 20ha of habitat suitable for wintering widgeon. Creation of such habitat will involve the creation of a drainage ditch and grips to create seasonally flooded grassland. In addition, a shallow pond will be excavated to provide a water treatment area. Spoil excavated during the creation of the pond will be used to landscape the site with the result that only the drainage ditch and water treatment area (Figure 2) will have an impact on sub-surface deposits.

### 1.3 Geology and topography

1.3.1 The site is located immediately to the south-east of the New Bedford River and the Ouse Washes at a height of between -1.6 m and 0 m above Ordnance Datum (aOD). The underlying geology consists largely of Nordelph Peat with a smaller area of Marine Alluvium (Terrington Beds) in the southern corner of the site (BGS Sheet 173). A recent soil survey undertaken at the site as part of the current scheme suggests that the peat, where present, was a maximum of 0.2 m thick.

## **1.4 Archaeological background**

- 1.4.1 A number of sites and find spots are recorded in the Norfolk Historic Environment Record (NHER) in the vicinity of the site.
- 1.4.2 A Bronze Age dagger and a Roman pewter dish (NHER 4432) were found during the 19th century some 500 m to the south-west of the site.
- 1.4.3 Excavations in the 1930s and 1950s revealed the site of a Roman settlement some 1500 m to the west of the site (NHER 4438). A series of cropmark enclosures (NHER 15806) adjacent to the excavated site may be associated with it.
- 1.4.4 Roman pottery has been found near Willow Green Farm (NHER2508), 800 m south of the site.
- 1.4.5 A series of linear features (NHER 1308), 1500 m to the south-west of the site, have been plotted from cropmarks. These are undated but pre-date the modern and post-medieval system of dykes.
- 1.4.6 A number of post medieval drainage mills and wind pumps existed in the area including one in the northern corner of the site (NHER 14503) and a second one in the southern corner of the site (NHER 16196).
- 1.4.7 As part of the current scheme, the site was the subject of a geophysical survey (ASWYAS, 2007). This revealed a series of natural features, including a possible palaeochannel crossing the site. The evidence for anomalies of archaeological origin was slight but a number of possible features were tentatively identified.

## **2 EVALUATION AIMS**

- 2.1.1 The aims of the field evaluation were to determine, as far as was reasonably practicable, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development.

## **3 EVALUATION METHODOLOGY**

- 3.1.1 The evaluation aims were met through the excavation of a series of 14 trial trenches, each 30 m by 2 m, within the proposed water treatment area, representing approximately 5% by area. A further four trenches were excavated along the line of the proposed drainage ditch (Figure 2).

3.1.2 The overburden was removed under close archaeological supervision by a 13 tonne[360°] mechanical excavator fitted with a toothless bucket. Each trench was excavated to the top of the upper peat horizon in the first instance. Where no archaeology was identified, sondages were excavated at each end of the trench to the top of the marine alluvium, in order to establish the potential for archaeology at lower levels.

## **3.2 Fieldwork methods and recording**

3.2.1 The evaluation was conducted in compliance with the standards outlined in the Institute of Field Archaeologist's Standard and Guidance for Archaeological Field Evaluations (as revised 2001), and Standards For Field Archaeology in the East of England (East Anglian Archaeology Occasional Paper 14) excepting where they were superseded by statements made below:

3.2.2 A unique-number site code was agreed with the Norfolk Museums Service. Arrangements have also been made with the Norfolk Museums Service for the deposition of the archive subject to agreement with the Client.

## **3.3 Service Location**

3.3.1 Before excavation began the statutory authorities were consulted, for information regarding the presence of any below/above ground services.

3.3.2 Trial trench locations were 'swept' before and during excavation with a Cable Avoidance Tool to verify the absence of any underground services.

## **3.4 Excavation**

3.4.1 Each trench was excavated using a 360° tracked excavator with a toothless bucket under the direct supervision of an archaeologist. Spoil was stored adjacent to, but at a safe distance from trench edges.

3.4.2 Machining continued in spits down to the top of the undisturbed natural geology or archaeological deposits, whichever was first encountered. Once archaeological deposits were exposed further excavation proceeded by hand.

3.4.3 A sample of each feature and of each feature or deposit type, for example pits, postholes, and ditches, was excavated and recorded.

## **3.5 Recording**

3.5.1 The trenches were cleaned by hand, as necessary, and the revealed features were sampled to determine their extent and nature, and to retrieve finds and environmental samples. All archaeological features were planned and where



excavated their sections drawn at scales of 1:20. All features were photographed using colour slide and black and white print film. Recording followed procedures laid down in the OAU Fieldwork Manual (ed D Wilkinson, 1992).

### **3.6 Finds**

3.6.1 No finds were recovered from the evaluation

### **3.7 Presentation of results**

3.7.1 Section 4 describes the general ground and soil conditions encountered at the site. Section 5 describes the sequence of deposits and archaeological remains from the trenches where archaeological deposits were encountered. Plans of all trenches which contained archaeological deposits are illustrated in Figure 3 and a representative selection of sections are illustrated in Figure 4. Those trenches without archaeological remains have not been described in detail. An inventory of all contexts including measurements not presented within the text is provided in Appendix 1.

## **4 RESULTS: GENERAL**

### **4.1 Soils and ground conditions**

4.1.1 The site occupies an exposed position on the Fenland to the south-east of the New Bedford River and Ouse Washes. At the time of the evaluation the fields were covered by short grass. The area of Trench 1 was under standing water which meant that the base of the trench could only be briefly observed.

4.1.2 The geology was relatively uniform across the site. Where sondages were excavated a layer of blue alluvial marine clay was reached, this was overlain by a lower peat deposit no more than 0.1m thick. This in turn was overlain by a layer of fen clay up to 0.14m thick followed by the upper peat. The thickness of the upper peat varied greatly due to shrinkage caused by post-medieval drainage and in the places where shrinkage was greatest a further layer of alluvial clay was present.

### **4.2 Distribution of archaeological deposits**

4.2.1 A total of seven trenches, Trenches 2, 5, 6, 7, 9, 12 and 14, contained evidence of archaeological deposits and these are described in turn below. The remaining 11 trenches revealed no evidence for archaeological deposits or features.

## 5 RESULTS: DESCRIPTIONS

### 5.1 Description of deposits

#### *Trench 2*

- 5.1.1 Trench 2 contained a shallow pit (202), 1.64 m long, 1.2 m wide and 0.14 m deep. The pit contained a single fill of redeposited peat (203).

#### *Trench 5*

- 5.1.2 A gully (503), orientated NE-SW, crossed the centre of the trench. It measured 0.66 m in width and 0.18 m in depth and contained four fills (594, 505, 506 and 507). The lower fill (507) comprised a waterborne clay deposit, overlain by a layer of sand (506). This was sealed by a layer of peat (505) and finally a second sand deposit (504).

#### *Trench 6*

- 5.1.3 Trench 6 revealed two gullies (606 and 608), both oriented NE-SW, 12 m apart. The northernmost of the gullies (608) terminated within the trench. It was 0.87m wide and 0.28 m deep and contained a single fill (607) which comprised a yellow-brown clayey sand. The southernmost gully (606) crossed the trench at an oblique angle. It was 0.71 m wide and 0.19 m deep. It contained two fills (604 and 605): the lower fill (605) comprised a compacted bluish brown clay and the upper fill (604) a compacted yellowish black sand.

#### *Trench 7*

- 1.1.1 A small pit-like feature (705) (Fig.3) was recorded in the northern end of Trench 7, measuring 0.7 m wide and 0.5 m deep. It contained two fills: the lower fill (707) comprised a firm mid grey clay overlain by (706) a grey silty clay. The pit was truncated by gully (703) which was orientated NE-SW and terminated towards the northern end of the Trench. It measured 1.48 m in width and 0.36 m in depth and contained a single fill (704) of loose, dark grey silty sand.

#### *Trench 9*

- 5.1.4 A deep vertical sided pit (907) (Fig. 3) was identified near the centre of Trench 9. It cut through the alluvial clay (905) and was sealed by the lower peat (905). The pit measured 1.59 m long x 1.0 m wide and was excavated to a depth of 1.07 m before it became too waterlogged for work to continue. Two fills were identified within the feature, the lower (906) comprised a tenacious mid blue grey clay and the upper (908) comprised a dark brown grey peat rich clay.

### *Trench 12*

- 5.1.5 A pit (1206) was recorded at the eastern end of Trench 12. It was 1.2 m long, 0.9 m wide and was excavated to a depth of 0.4 m before waterlogging prevented further intervention. A single fill (1207) was identified, it comprised a firm dark bluey black peaty clay. At the eastern end of the trench a second small pit (1203) was recorded. It measured 1.2 m long x 0.66 m wide and was 0.18 m deep. Two fills were identified, the lower (1204) comprised a loose, dark yellow silty clay and the upper (1205) comprised a loose dark bluish black peat.

### *Trench 14*

- 5.1.6 A small pit or the terminal of a gully (1406) was recorded near the centre of Trench 14. It measured 0.98 m long x 0.58 m wide x 0.2 m deep and contained a single fill (1405), which comprised a mottled brown grey silty clay.

## **6 DISCUSSION AND INTERPRETATION**

### **6.1 Reliability of field investigation**

- 6.1.1 During the evaluation conditions were generally good, although the water table was high resulting in localised flooding within some trenches. The underlying natural geology was thoroughly tested and appears to be a mixture of peat layers and marine alluvium as indicated in the geological mapping for the area.
- 6.1.2 No finds were recovered from excavated features, indicating a general lack of past human activity, other than agricultural activity, on the site.
- 6.1.3 The results of the evaluation confirmed the generally low potential for archaeological deposits indicated by the previous geophysical survey of the site.
- 6.1.4 The results obtained during this evaluation are felt to be representative of the site as a whole.

### **6.2 Overall interpretation**

- 6.2.1 The evaluation revealed two types of feature within the impact area; a series of pits and a series of drainage ditches.
- 6.2.2 The pits (907 and 1206) are of particular interest as they appeared to be sealed by the Nordelph peat. As the peat is thought to have formed from about 4000 years ago, it is possible that these features date to the Neolithic period. However, no finds were recovered from the features and it is possible that they are of natural origin.

- 6.2.3 Six gullies were identified, all orientated NE-SW. These are likely to represent the remains of ditches dug in the post-medieval period in order to drain the fen for agricultural purposes. Post-medieval drainage mills exist to the north (NHER 14503) and south (NHER 16196) of the site and it is likely that these gullies fed into the ditches which were pumped out by the mills.

## APPENDICES

## APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

<i>Trench No</i>	<i>Ctxt No</i>	<i>Type</i>	<i>Width in m</i>	<i>Thickness in m</i>	<i>Comment</i>
1	100	Layer		0.23	Topsoil
1	101	Layer		>0.13	Alluvial Clay
2	200	Layer		0.48	Topsoil
2	201	Layer		>0.1m	Alluvial Clay
2	202	Cut	1.64	0.14	Pit
2	203	Fill	1.64	0.14	Pit Fill
2	204	Layer			Peat
3	300	Layer		0.31	Topsoil
3	301	Layer		0.17	Alluvial Clay
3	302	Layer		0.33	Peat
3	303	Layer		>0.14	Alluvial Clay
4	400	Layer		0.39	Topsoil
4	401	Layer		>0.1	Alluvial Clay
5	500	Layer		0.4	Topsoil
5	501	Layer		0.06	Alluvial Clay
5	502	Layer			Sand
5	503	Cut	0.66	0.18	Linear
5	504	Fill	0.36	0.06	Pit Fill
5	505	Fill	0.4	0.08	Pit Fill
5	506	Fill	0.5	0.05	Pit Fill
5	507	Fill	0.55	0.2	Pit Fill
5	508	Void			
5	509	Layer		0.4	Alluvial Clay
5	510	Layer		0.2	Peat
5	511	Layer		0.1	Sand
5	512	Layer		0.14	Peat
6	600	Layer		0.38	Topsoil
6	601	Layer		0.04	Sand
6	602	Layer		0.18	Alluvial Clay
6	603	Layer		0.24	Peat
6	604	Fill	0.62	0.14	Gully Fill
6	605	Fill	0.2	0.18	Gully Fill
6	606	Cut	0.71	0.19	Gully
6	607	Fill	0.87	0.28	Gully Fill
6	608	Cut	0.87	0.28	Gully
7	700	Layer		0.48	Topsoil
7	701	Layer			Peat
7	702	Layer			Alluvial Clay

7	703	Cut	0.8	0.36	Gully
7	704	Fill	0.8	0.36	Gully Fill
7	705	Cut	0.7	0.5	Pit Cut
7	706	Fill	0.25	0.2	Pit Fill
7	707	Fill	0.6	0.3	Pit Fill
7	708	Fill	0.17	0.06	Pit Fill
8	800	Layer		0.29	Topsoil
8	801	Layer		0.14	Subsoil
8	802	Layer	>0.11		Peat
9	900	Layer		0.36	Topsoil
9	901	Layer		0.14	Subsoil
9	902	Layer		0.32	Peat
9	903	Layer		0.09	Alluvial Clay
9	904	Layer		0.03	Peat
9	905	Layer	>0.7		Alluvial Clay
9	906	Fill		0.84	Pit Fill
9	907	Cut		0.64	Pit Cut
10	1000	Layer		0.31	Topsoil
10	1001	Layer		0.26	Peat
10	1002	Layer		0.06	Alluvial Clay
10	1003	Layer		0.05	Peat
10	1004	Layer	>0.12		Alluvial Clay
11	1100	Layer		0.35	Topsoil
11	1101	Layer			Peat
12	1200	Layer		0.22	Topsoil
12	1201	Layer		0.38	Peat
12	1202	Layer			Alluvial Clay
12	1203	Cut	0.66	0.18	Gully Cut
12	1204	Fill	0.66	0.16	Gully Fill
12	1205	Fill	0.6	0.1	Gully Fill
12	1206	Cut	0.9	0.4	Pit Cut
12	1207	Fill	0.9	0.4	Pit Fill
12	1208	Layer	0.6	0.3	Alluvial Clay
13	1300	Layer		0.36	Topsoil
13	1301	Layer		0.15	Peat
13	1302	Layer		0.11	Alluvial Clay
13	1303	Layer		0.04	Peat
13	1304	Layer	>0.19		Alluvial Clay
14	1400	Layer		0.35	Topsoil
14	1401	Layer		0.26	Peat
14	1402	Layer		0.1	Alluvial Clay
14	1403	Layer		0.04	Peat
14	1404	Layer	>0.11		Alluvial

					Clay
14	1405	Cut	0.58	0.26	Gully Cut
14	1406	Fill	0.58	0.26	Gully Fill
15	1500	Layer		0.39	Topsoil
15	1501	Layer		0.04	Peat
15	1502	Layer		0.11	Alluvial Clay
15	1503	Layer		0.03	Peat
15	1504	Layer	>0.14		Alluvial Clay
16	1600	Layer		0.35	Topsoil
16	1601	Layer		0.14	Alluvial Clay
16	1602	Layer		0.02	Peat
16	1603	Layer	>0.04		Alluvial Clay
17	1700	Layer		0.34	Topsoil
17	1701	Layer		0.11	Peat
17	1702	Layer		0.09	Alluvial Clay
17	1703	Layer		0.04	Peat
17	1704	Layer	>0.14		Alluvial Clay
18	1800	Layer		0.35	Topsoil
18	1801	Layer		0.1	Alluvial Clay
18	1802	Layer		0.24	Peat
18	1803	Layer		0.1	Alluvial Clay
18	1804	Layer		0.22	Peat
18	1805	Layer		0.08	Peat
18	1806	Layer	>0.1		Alluvial Clay

**APPENDIX 2 BIBLIOGRAPHY AND REFERENCES**

ASWYAS, 2007 *Land east of Welney Norfolk geophysical survey*, Report No. 1716.  
Unpublished report to Environment Agency.

IFA, 1992 *Standard and Guidance for Archaeological Evaluations*, Institute of Field  
Archaeologists

OA, 1992 *Fieldwork Manual* (ed. D Wilkinson, first edition, August 1992)



### **APPENDIX 3 SUMMARY OF SITE DETAILS**

**Site name:** Lady Fen, Welney

**Site code:** 51061

**Grid reference:** TL 552 945

**Type of evaluation:** Eighteen 30m trenches

**Date and duration of project:** 28 January 2008 - 5 February 2008

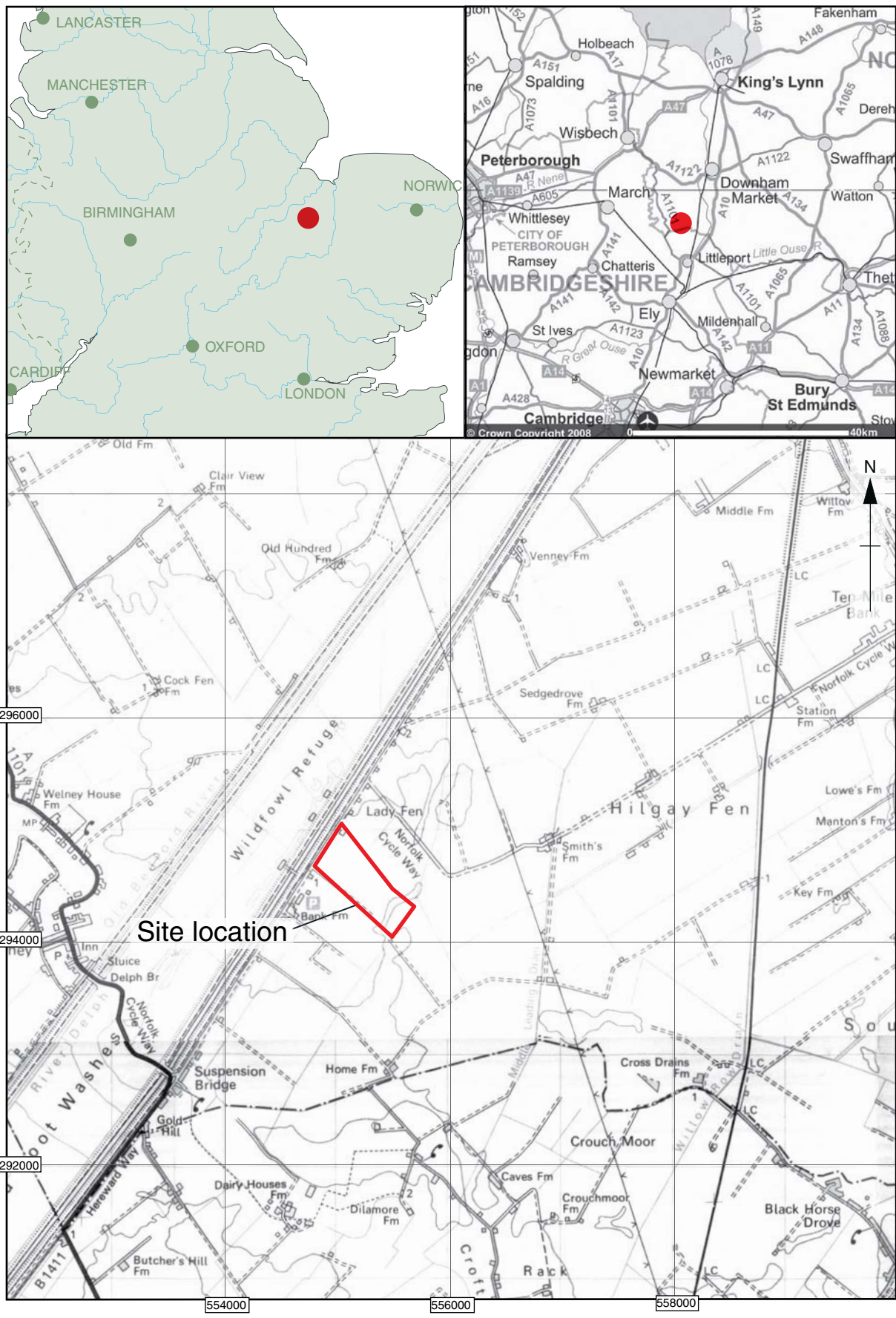
**Area of site:** 20ha

**Summary of results:** Six linear drainage gullies and four possible pits were identified.

**Location of archive:** The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Norfolk County Museums Service in due course, under the following accession number: 51061



Server: go:/oapubst1\_RtoZ\*WELLFEV\*Welney Lady Fen\*16.01.08



Scale 1:50,000

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Figure 1: Site location





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	Proposed trench
	Archaeological site or find spot
	Proposed scheme
	Ditch
	Water treatment area
<b>Geophysics</b>	
	Possible archaeological feature
	Natural feature/ geology

Survey Data supplied by :

1:5000

CHECKED BY:

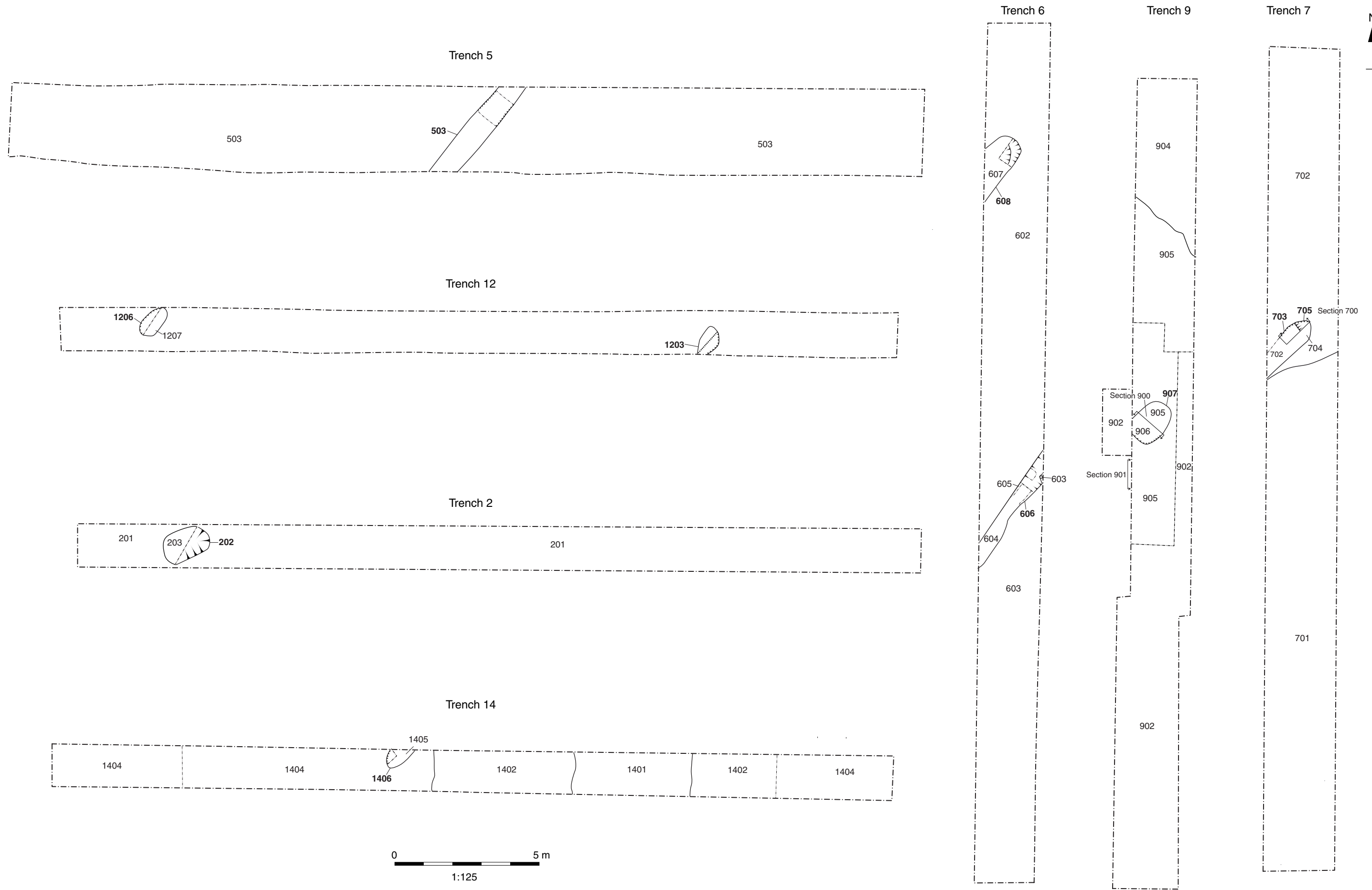


Figure 3: Selected trench plans



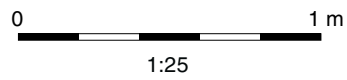
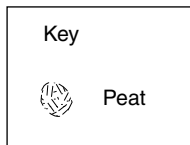
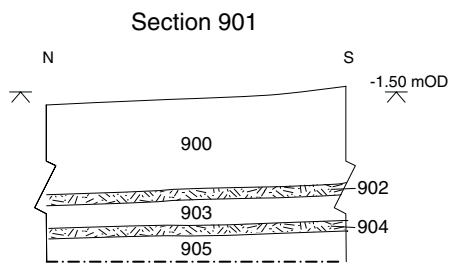
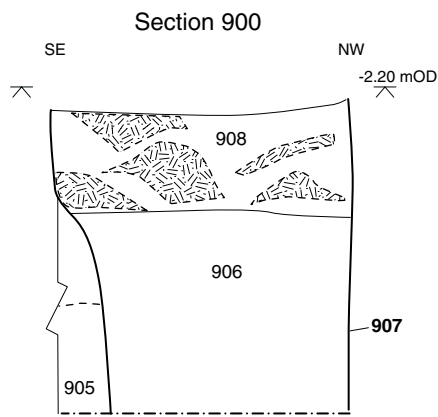
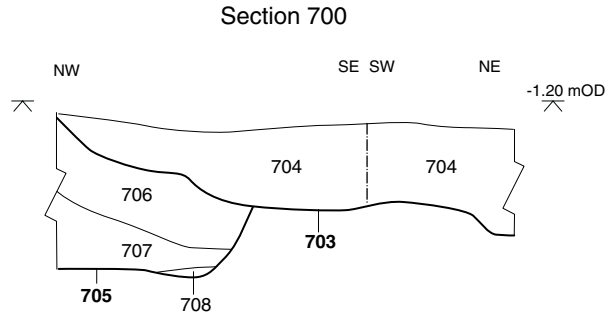


Figure 4: Selected sections







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