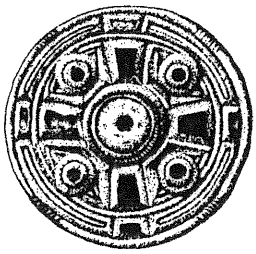

Archaeological Field Unit

Medieval Drainage, Red Lion Lane, Sutton: An Archaeological Evaluation

Joe Abrams

August 2000

Cambridgeshire County Council

Report No. A162
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2000

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SUMMARY

An archaeological evaluation was carried out at Red Lion Lane, Sutton NGR TL 4438 7865 in order to inform the planning process. The work was carried out by the Archaeological Field Unit of Cambridgeshire County Council between the 16th and the 18th of August 2000.

Three trenches totalling 78.5m in length, giving a 2.3% sample, were located within the 0.546 hectare area of a proposed housing development. Two trenches (1 and 2) contained features of archaeological origin. Trench 1 contained 3 drainage ditches and one pond feature, finds from this trench included sherds of Thetford ware (900-1200 AD) and Stamford ware (850-1250 AD) and Shelly ware (1150-1350 AD). Trench 2 contained a pond feature, one ditch terminal and two drainage ditches. Finds from this trench included sherds of Ely ware (1150-1350 AD) and Shelly ware (1150-1350 AD). One trench (3) contained only a natural gully and no archaeological features at all

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NGR TL 4438 7865

1 INTRODUCTION

1.1 An archaeological evaluation was carried out at Red Lion Lane, Sutton to inform the planning process in advance of a housing development. The work was carried out by the Archaeological Field Unit of Cambridgeshire County Council between the 16th and the 18th of August 2000.

2 GEOLOGY AND TOPOGRAPHY

2.1 Red Lion Lane follows a very steep downward slope to The Southerns and the subject site is located at the base of this slope. The benchmark on Sutton high Street is 22.11m above Ordnance Datum, whereas the temporary benchmark on site was 6.40m above Ordnance Datum. Although it lies at the base of the steepest topography, the subject site does rise steeply to its northern edge which is 8.34m above ordnance datum. With a more gradual sloping from the central and southern areas of the site at 5.5m above ordnance datum, towards the fen Basin south of the Subject site (South Fen). The ordnance datum at the lowest point in the basin is 1.0m above ordnance datum, considerably lower than that on the subject site. However during the medieval period the fen edge was only 40 – 50m south of the subject site (see fig 1). Which places the site very close to the fen edge.

2.2 Much of the site was covered with tall nettles and other plants, which may have obscured minor undulations. Modern dumps of scrap metal and other rubbish lay about the site forming heaps in the general topography. The topsoil had been badly compacted and mixed due to tree clearance late last year, which had left deep (0.20m) wheel ruts in places. The site was bordered on the west by a lane, which follows the same steep topography as Red Lion Lane. A ditch and hedge bordered the south. On its north edge an orchard bordered the site. Housing and The Southerns, which provided an access road to the site, bordered the eastern edge of the site.

2.3 The geology in Trench 1 was clay; in Trench 2 it was sand and in Trench 3 it was sand and clay. The topography of the site slopes from north to south. And this was reflected in the geology of the trenches. Clay occurs in the *lower, southern* trench 1 and the *lower eastern* part of trench 3. Sand occurs in the *higher, northern* trench 2 and the *higher western* part of Trench 3.

Figure 1 *Site location plan showing archaeological trenches in relation to development area*

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 In a wider context the village of Sutton is located on the western edge of the Isle of Ely on a spur of high ground.

3.2 Important prehistoric remains have been found in the parish of Sutton, most from the rises and islands of lighter soil lying in the fens, particularly North Fen and Sutton Meadlands to the west of the village. An important Long Barrow is located approximately 1 kilometre to the southwest of the village and a second has been observed on aerial photographs (Hall, 1996).
Roman remains have been found in the vicinity of the village including a cremation (SMR 05744) found whilst cutting a drainage channel along Oates Lane which is approximately 600 metres to the east of the subject site. Other Roman remains have been found in the parish but these are largely unprovenanced.
Anglo-Saxon remains have been found in the Parish but these are unprovenanced.
Medieval pottery has been found in the village as might be expected in a village which is listed in Domesday. The name Sutton means South Farm and may relate to its position in the Isle of Ely. The medieval village probably clustered around the church and along the High Street.

4 METHODOLOGY

4.1 Three trenches totalling 78.5m in length, giving a 2.3% sample, were located within the 0.546 hectare area of a proposed housing development of 19 houses and garages. Topsoil and modern overburden was removed in the trenches using a wheeled mechanical excavator with a flat bladed ditching bucket to a width of 1.6m, under the full time supervision of an archaeologist. Trenches were located to give a representative sample of the available area.

4.2 After machining each trench was photographed. A sample of every archaeological feature was excavated by hand in order to determine date and character. The AFU's single context based recording system was used to record all the archaeological features and deposits, sections were hand drawn at a scale of 1:10 for features, and 1:50 and 1:100 in the case of entire evaluation trench sections. Plans were hand drawn at a scale of 1:100. Three environmental samples were taken from features **13** (sample 1), **20** (sample 2) and **23** (sample 3) in Trench 1, which held waterlogged organic deposits with potential to provide excellent micro and macro botanical remains. In addition all the spoil heaps from the trenches were scanned for artefacts by eye.

4.3 Features within all 3 trenches became immediately flooded upon excavation, due to the presence of groundwater, a problem that became exacerbated by

heavy rain. It is worth pointing out, that if excavation were to be carried out on the subject site then provision would need to be made for the problems associated with groundwater. Pumping equipment would be required and locations for the deposition of this water would have to be arranged.

4.4 In this report deposit numbers are shown in plain text and cut numbers are in **bold** text.

5 RESULTS

5.1 Trench 1

Trench 1 was 23m long and 0.80m to 1.0m deep and aligned east west. The topsoil 7 was a dark brown compacted fine sand/ silty layer 0.30m deep. The subsoil 8, a mid brown fine sand layer with moderate amounts of relatively modern brick and mortar inclusions was 0.50m deep.

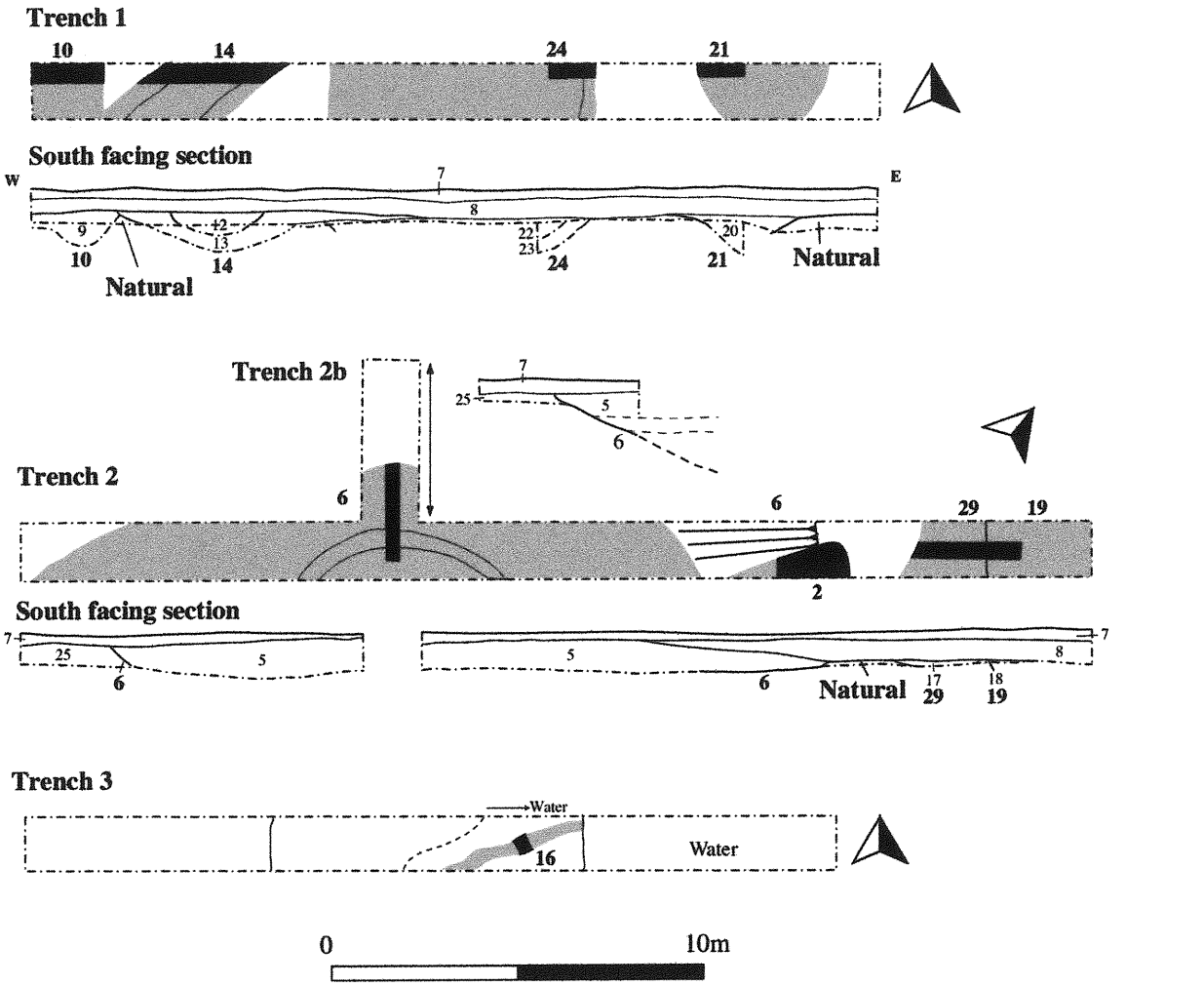
A large circular pit/pond **21** was observed in the eastern end of this trench, which was extended in order to define its eastern extent. This feature was 3.6m long at the northern edge of the trench, curving to 2m long at the southern. A slot 1.5m long and 0.45m deep was excavated from its western edge. This identified two fills 20 and 28. Fill 20 was a distinctive black organic deposit with moderate amounts of shell and flint inclusions and occasional pieces of animal bone. Frequent inclusions of abraded pink/red brick fragments were present; notably these contained small white inclusions. Although undated due to their fragmentary state such bricks are known to exist in East Anglia during the medieval period. Such bricks contain "some grog, marine shells.... colour varies from yellow through khaki and pink to red and purple-red, generally streaky on the surface and inconsistent in section."(Drury 1993). Certainly this description could be applied to the small brick sample retrieved from deposit 20, however, further excavation would be required to provide some more complete examples for analysis, otherwise these brick fragments may be intrusive from a later period during which material was dumped on top of these features. Sherds of Thetford ware (900-1200 AD) were contained within deposit 20 and it was 0.40m deep.

The waterlogged state of fill 20 and its high organic content provided excellent conditions for the preservation of micro and macro botanical and other environmental remains. Thus sample 2 was taken, this contained very common Wheat (free threshing), occasional Barley (hulled grain), and rare amounts of Rye (grain) and Oats/ Brome grass. Other remains identified in small amounts included peas, plum stones and slag and daub fragments (see appendix 3 for more details). Fill 28, below 20, was a light grey clay deposit with some charcoal and snail shell inclusions, this contained no finds, and probably represents the primary silting up of this pit/pond feature. It was 0.05m deep.

To the west of pit **21** was a large drainage ditch **24**. This was 7.5m wide and was orientated on a north-south alignment. A slot 1.5m long was excavated from its eastern edge to a depth of 0.7m. It had a clay rich upper fill 22 which had occasional shell inclusions and was 0.35m deep, this contained no finds. However, the black organic-rich fill 23 below, produced sherds of Stamford ware pottery (850 – 1250 AD). This fill was also 0.35m deep and contained frequent small shell and occasional abraded pink/red brick inclusions similar to those found in deposit 20 (see above). Again the waterlogged state of this sealed feature provided excellent conditions for the preservation of micro and macro botanical remains and other environmental remains. Thus sample 3 was taken, this contained common amounts of wheat (free threshing), occasional Barley (hulled grain) and rare amounts of Oats/ Brome grass. Also present in small amounts was fish and mammal bone (see appendix 3 for more details). Significantly the location and alignment of **24** matches very closely with a large drainage ditch marked clearly on Ordnance Survey Maps as running directly towards Trench 1 from South Fen. It is likely that **24** is part of the mapped drainage ditch that runs south into the fen basin (South Fen) and although still in use may be of considerable antiquity.

Drainage ditch **14** was located further to the west. This feature was 3.30m wide and was excavated to a depth of 0.65m. This had a northeast - southwest alignment. Similar to **24** this feature also had a clay rich upper fill 12, which contained sherds of shelly ware pottery (1150-1350 AD), it measured 0.3m deep, and had frequent shell and occasional red/pink brick inclusions similar to those found in deposit 20 (see above). Beneath this was 13 another black organic fill, which produced bone finds. This was excavated to a depth of 0.35m, it had frequent snail shell inclusions and a layer of waterlogged wood at the limit of excavation. Fill 13 also provided excellent conditions for the preservation of micro and macro botanical and other environmental remains, thus, sample 1 was taken, this contained very common amounts of Wheat (free threshing), common amounts of Grass (culm nodes), occasional amounts of Barley (hulled grain), and Pea. In rare amounts Rye (grain) was present. Other remains detected include mammal bones, marine shells, peas and bird bone (see appendix 3 for more details).

Directly adjacent to and truncated by **14** was ditch **10**. This had a north south alignment and was also directly adjacent to the extreme western limit of trench 1. Therefore we do not have its full width. The fill of this shallow ditch was 9 a grey silty clay, with occasional flint and shell inclusions, it had a depth of 0.3m and produced 1 sherd of shelly ware pottery (1150 – 1350 AD).



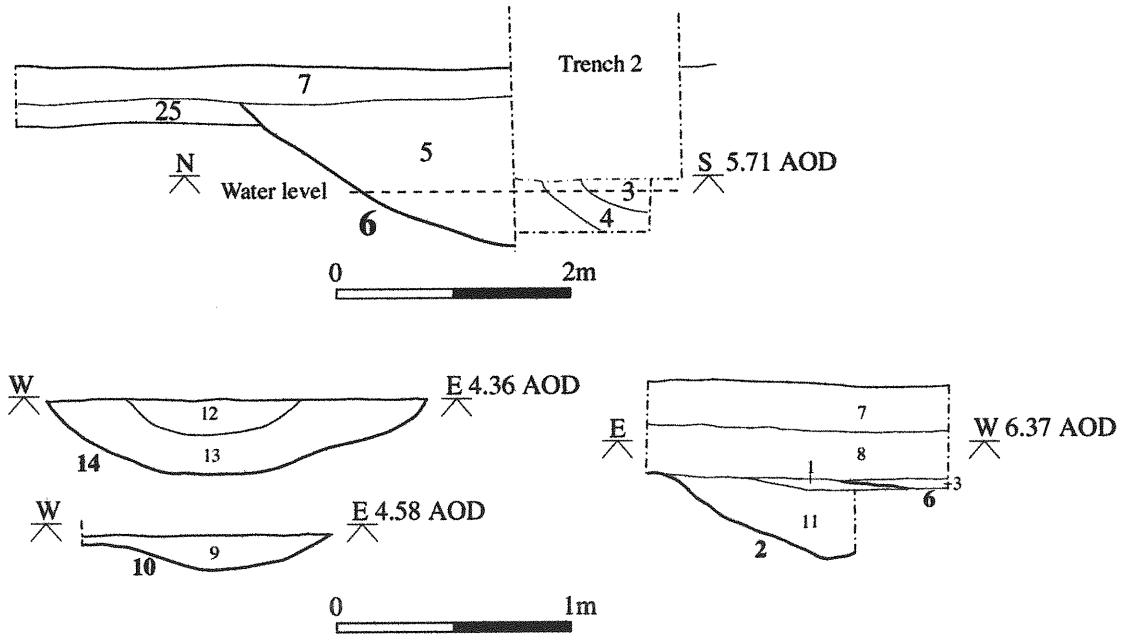


Figure 2 *(Top) Trench plans with excavated features in black*
(Above) Selected sections

5.2 Trench 2 and 2B

Trench 2 was 29m long and 1.1m deep, and aligned northeast southwest. The topsoil 7 was a dark brown compacted fine sandy-silt layer 0.3m to 0.4m deep. The subsoil 8 a mid brown fine sand layer with moderate amounts of brick and mortar inclusions was 0.6m deep.

Trench 2B was 4.5m long and 0.5m deep in its northern end becoming 1.1m deep in its southern end, and aligned north south. The topsoil 7 was a dark brown compacted fine sandy-silt layer 0.3m deep. The subsoil 25 a dark brownish black humic layer of fine sand composition very different to the subsoil in other parts of the site, was 0.25m deep.

In the easternmost end of this trench was feature **19,** this being partly obscured by the eastern end of Trench 2 but was 2.8m wide and 0.25m deep. This shallow ditch had an approximately north south alignment. It had a brown sandy fill 18, which had moderate amounts of shell fragment inclusions and contained no finds.

Feature **19** was truncated by **29**, which also ran on a north south alignment. This feature measured 1.75m wide and 0.2m deep. It had a dark grey sandy fill 17, which again had moderate amounts of shell inclusions. This feature also produced no finds.

No dating evidence was available for these features but their north south alignment, their function as likely drainage ditches and their stratigraphic position sealed below the subsoil suggests that they may share a similar medieval date to the drainage ditches in Trench 1. Of course without open area excavation any dates and relationships these features may have remains conjecture. The presence of diesel contamination in these features is likely to have been the result of recent activity visible in the topsoil, rather than having any relation to their original function.

Further west, part of a possible ditch terminal **2** was located. This ran into the southern section of trench 2, and reached 1m across the trench. It was truncated by pond **6** to the west. Approximately half of the butt end of this feature was excavated. Two fills were recorded, the upper fill 1 was a dark greyish brown, clay/silt fill with occasional flint and shell inclusions. It was 0.1m deep and contained no finds. Fill 11 lay beneath this; it was a dark grey clay/silt deposit with bone and sherds of Ely ware (1150 – 1350 AD) and shelly ware (1150-1350 AD), pottery. It contained occasional flint, shell, burnt stone and charcoal inclusions and was 0.6m deep.

A very large pond feature **6** was recorded, this occupied 18.5 metres of trench 2, it was excavated to a depth of 1.5m but is likely to have been considerably deeper than this if excavation had continued south. Pond **6** also occupied 2.5m of trench 2B, which had been opened up specifically to locate the northern limit of this large feature. Excavation identified three fills, the uppermost of which was 3 a yellowish light brown, medium sand fill with inclusions of

relatively modern building rubble and mortar, this fill was 0.3m deep. Below this lay 4 a blueish dark grey, clay fill which contained animal bones, post medieval Red ware pottery, and some almost complete bricks. These bricks were clearly not modern as they had some inconsistency in colour and composition, however they are hard, light pink in colour and have mortar still adhering to them in cases, suggesting a post medieval date. They provide a good comparison to the far less complete fragments from the deposits in Trench 1. This suggests they are at least a different *type* of brick but more significantly they were from a later *period* to those found in features **21**, **24** and **14** in Trench 1 (see above). Deposit 4 was 0.8m deep. The lowest fill was 5 a medium dark brown fill of fine sand composition, this contained the base of a glass storage vessel (17^{th}/ 18^{th} C AD) and animal bone finds.

Significantly, pond **6** truncates subsoil 25 a dark brown humic soil layer, but is sealed by subsoil 8, which also seals the other features on site. Subsoil 8 contains frequent dumps of relatively recent material (bricks, mortar). It is likely that 8 is partly the result of soil slippage from the northern higher ground and partly a dump layer, which has buried the various ditches and ponds, which had dominated the subject site. Although this land is relatively high when compared to the fen basin (south fen) directly south of the site, it still occupies the base of a very steep slope, which Red Lion Lane itself runs down. During the medieval period the fen edge was only 50m south of the site (see fig 1). Thus the subject site would have been liable to regular flooding, particularly when punctuated by such enormous ponds and frequent ditches, which although now redundant as drainage systems would act as reservoirs for any floodwaters from the fen basin. It is likely that the relatively recent back filling in pond **6** and the subsequent dumping layer/subsoil of 8 represent activity during a phase when the subject site had not been maintained as a drainage system or for agriculture, and instead was used for dumping. Perhaps drainage pond 6 was no longer required, because other drainage systems in the immediate vicinity had made this redundant. The subsequent result of this was that the archaeological features were completely back filled and the subject site levelled.

Subsoil 25 represents an earlier phase of the site and interestingly shares a lot of similarities in composition to the rich organic fills found in trench 1 at the lowest and most southerly point of the site which would also have been most liable to flooding from the fen basin. It is likely that the deposits in the features of this lower trench and the subsoil 25 together represent repeated events of flooding and depositing of humic material from the fen basin. South Fen, which is adjacent to the site and is now drained and used for agriculture, contains fields of black humic rich soil. It is from this area that the subject site would have been periodically flooded in the medieval period as the fen edge was only 50m south (see fig 1), and thus from where these humic deposits are likely to have come. If 25 were a colluvial deposit from the higher ground north of the site then it would have had a more sandy composition.

5.3 Trench 3

Trench 3 was 22m long, 1.2m deep in its southern end and 0.4m deep in its northern end; it ran on an east west alignment (see Fig.2). It was located in the northeastern part of the subject site. The topsoil 7 was a dark brown compacted fine sand/ silty layer 0.3m to 0.4m deep. The subsoil 8 a mid brown fine sand layer with moderate amounts of brick and mortar inclusions, was 0.1m deep in the western end of the trench becoming 0.6m to 0.7m deep in the eastern end of the trench.

One thin meandering gully **16** was present. It ran approximately northeast-southwest for 4m within the trench and was 0.07m deep and 0.4m wide at the point at which it was excavated. It contained one fill 15, a blue clay deposit, which contained no finds. Gully **16** was interpreted as being a natural drainage gully running down slope through the natural sands, which form the higher western part of the trench towards the natural blue clay, which occupies the lower eastern part.

This trench contained no archaeological features but its value was is that it showed the dramatic topography of the site. The western part of this trench had 0.4m of deposits over the natural sands whereas the eastern part only 23m away had 1.2m of deposits over the natural clay. Perhaps this is further evidence of dumping/ make up layers being used to level this area.

6 DISCUSSION

The earliest phase of activity consists of drainage ditches **24** and **10** both on a north south alignment and **14** on a northeast-southwest alignment. Pond **21** appears to be contemporary with these features and is likely to be part of the same drainage system. All these features contain pottery dating to no later than 1350 AD. These are concentrated in the southern part of the site (Trench 1). Their presence may suggest that pressure on land at this time was such that wetter land was drained to provide more farmland.

Trench 2 contained two shallow ditches on a north south alignment **19** and **29**; these features contained no finds. A possible ditch terminal **2** was also recorded, which contained medieval finds, and may be part of the same drainage system as the ditches recorded to the south in Trench 1. Open area excavation would be necessary to confirm this.

Later in the medieval or early post medieval period there was a phase during which the drainage system of pond/s and ditches was not maintained, subsequently they became back filled with black organic deposits, probably caused by regular flood events from the Fen basin immediately south of the site. Brick fragments contained within deposits in features **24**, **14** and **21** would need further sampling to see if a firm date could be given for them. These may be contemporary with the medieval pottery sherds mentioned above or may have been deposited during a later period when the features were back filled.

These flood events also appear to have left a layer of black humic soil 0.25m deep 25, which was located north of Trench 2. Further excavation may reveal that this layer is present in other parts of the site.

The next phase of activity comes in the form of a large pond **6**, which has been back filled during the post-medieval period and contains brick, glass, pottery and bone from that period, although its original construction and use may have been earlier. Significantly this pond truncates the above layer 25. It appears to be an effort to reclaim and drain this piece of land, which being relatively low lying and near to the fen basin may have become permanently waterlogged once the earlier drainage system was back filled. The sump or soakaway pond **6** was itself then deliberately back filled with rubbish in the post medieval period, perhaps as more extensive drainage systems in the vicinity meant that drainage on the subject site was no longer required.

Another phase of dumping followed this during which relatively modern material was deposited forming subsoil 8 a layer 0.5m – 0.7m deep on the site. This layer may have been the result of soil slippage from the northern higher ground, and a continuation of dumping on the subject site. This led to the levelling of the remaining hollows, which would have existed at the top of the partially back filled medieval and post medieval ditches and ponds. Prior to this levelling these hollows would have acted as reservoirs for flood water and would have meant that certain parts of the subject site were constantly wet. Ultimately this dumping resulted in the general level of the area being raised and levelled, making it less prone to flooding events, and more useful as agricultural/orchard land, which it became during this century.

The final phase of use was the orchard which has left a layer of topsoil 7 0.3m deep which now covers the site.

Anecdotal evidence was gathered relating to the turn of the century which recalled how boats used to be launched from the bottom of Red Lion Lane, during the regular flood events which were experienced at that time. Further anecdotal evidence suggested that there used to be a total of seven ponds located in or near the site. These provide a different form of evidence to back up the overall impression that the subject site has been an area prone to flooding from the fen basin until recent drainage methods have eradicated this problem. At least two drainage systems have been used and have fallen into disuse on the subject site since the early medieval period.

7 CONCLUSION

The subject site shows good potential for further archaeological work as it produced early medieval pottery from well sealed contexts together with an excellent assemblage of archaeobotanical remains. Waterlogging within archaeobotanical features has resulted in good preservation of artefactual and ecofactual material and as such the potential of the site for contributing to an understanding of the diet and crops available in the area during the medieval period is very high (Alan Clapham *pers comm*).

ACKNOWLEDGEMENTS

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The project was carried out and the report prepared in response to a brief written by Andy Thomas from the County Archaeology Office (Development Control). Who visited and monitored the site.

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SMR. Sites and Monuments Record of Cambridgeshire County Council

Appendix 1 Finds List

Context	Finds category	Date/description	Quantity
4	Brick	Post Medieval	2
5	Glass	17th C AD Base of storage vessel	1
5	Bone	Animal	2
5	Pottery	Post Medieval Red Ware	1 sherd
9	Pottery	Shelly ware	1
11	Bone	Animal	2
11	Pottery	Shelly ware1150 – 1350 AD	1
11	Pottery	Ely ware 1150 – 1350 AD	2
12	Pottery	Shelly ware, 1150 – 1350 AD	1 sherd
13	Bone	Animal	1
20	Bone	Animal	1
20	Brick	Medieval, abraded	6 pieces
20	Pottery	Thetford ware, 900 – 1200 AD	1 sherd
23	Pottery	Stamford ware, 900 – 1150 AD	4 sherds

Appendix 2 Context List

Trench No	Context No	Fill of	Filled by	Context type
2	1	2	-	Ditch butt end fill
2	2	-	1, 11	Ditch butt end
2	3	6	-	Pond fill
2	4	6	-	Pond fill
2	5	6	-	Pond fill
2	6	-	3,4,5	Pond cut
1, 2, 3	7	-	-	Topsoil
1, 2, 3	8	-	-	Topsoil
1	9	10	-	Ditch fill
1	10	-	9	Ditch cut
2	11	2	-	Ditch butt end fill
1	12	14	-	Ditch fill
1	13	14	-	Ditch fill
1	14	-	12, 13	Ditch cut
3	15	16	-	Natural gully fill
3	16	-	15	Natural gully
2	17	29	-	Ditch fill
2	18	19	-	Ditch fill
2	19	-	18	Ditch cut
1	20	21	-	Pond fill
1	21	-	20	Pond cut
1	22	24	-	Ditch fill
1	23	24	-	Ditch fill
1	24	-	22, 23	Ditch cut
2B	25	-	-	Subsoil
1, 2, 3	26	-	-	Natural – clay
1, 2, 3	27	-	-	Natural – sand
1	28	21	-	Pond fill
2	29	-	17	Ditch cut

Appendix 3 – Archaeobotanical and environmental sampling results

Sample No	Context No	Type	Abundance
1	13	Wheat – Triticum sp grain Tetraploid/ hexaploid (free threshing)	Very common
1	13	Barley – Hordeum sativum (hulled grain)	Occasional
1	13	Rye grain – Secale cereale	Rare
1	13	Pea – Pisum sativum	Occasional
1	13	Grass – Poaceae, culm nodes	Common
1	13	Peas	N/A
1	13	Mammal bones	N/A
1	13	Marine shells	N/A
1	13	Bird bone	N/A
2	20	Wheat – Triticum sp grain Tetraploid/ hexaploid (free threshing)	Very common
2	20	Barley – Hordeum sativum (hulled grain)	Occasional
2	20	Rye grain – Secale cereale	Rare
2	20	Oats/ brome grass (Arena/ Bromus)	Rare
2	20	Peas	N/A
2	20	Plum stones	N/A
2	20	Slag	N/A
2	20	Daub	N/A
3	23	Wheat – Triticum sp grain Tetraploid/ hexaploid (free threshing)	Common
3	23	Barley – Hordeum sativum (hulled grain)	Occasional
3	23	Oats/ brome grass (Arena/ Bromus)	Rare
3	23	Fish Bone	N/A
3	23	Small mammal bone	N/A

Note – N/A applies to remains where only small amounts were present and further Sampling would be needed to identify reliable quantities.

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