ST. FAITH'S SCHOOL PLAYING FIELD, LATHAM ROAD, CAMBRIDGE

An Archaeological Evaluation

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Summary

An archaeological evaluation was undertaken on the St. Faith's/ Leys School playing field within the footprint of a proposed 0.6 hectare Astroturf all-weather hockey pitch. Three trenches totalling some 160 metres of sample revealed a considerable depth of topsoil and sub-soil accumulation above the natural, yet no clear evidence of quarrying or of any of the archaeological features anticipated from the analysis of air photo parch marks recorded from the west end of the playing field. The latter originally suggested the presence of an Iron Age/ Romano-British field system and possible east-west trackway heading in this direction, the latter partly concealed by a greater depth of soil cover. One possible short ditch section identified as a parch mark was visible as an undated (but probably modern) feature at the north end of Trench 1, but apart from this and a moderate amount of Victorian pottery, glass and clay pipe present within the topsoil (former garden or allotment soil) layer, no archaeology was encountered. A concentration of both modern and more ancient tree throws seemed to indicate a formerly well wooded area, perhaps superseded by medieval - post-medieval open fields. No clear evidence of ridge and furrow or even more modern plough disturbance could be seen, however, the considerable depth of soil accumulation along the western side might indicate the presence of a headland soil.

Introduction

An archaeological evaluation was undertaken by the Cambridge Archaeological Unit (CAU) on the site of the St. Faith's/ Leys School playing field, Latham Road, Cambridge between 1st and 3rd October 2007. The work followed the specification (Standring 2007), as approved by the Archaeology Section, CAPCA, Cambs. CC for the client St. Faith's School. An air photo study was commissioned by St. Faith's School for the purposes of this project in advance of the trench evaluation.

The proposed site for the all-weather Astro-Turf covered hockey pitch was at the east end of the St. Faith's/ Leys School Playing Field [centred on TL 450566], the entrance of which lies off Latham Road (SEE Figures 1&2). The footprint for the new pitch included the area of an existing grass hockey pitch and part of the school football pitch, an area of 100m x 60m (0.6 hectare), but with a proposed walk way surround and drain along its eastern margin. Some 80m of 2m wide evaluation trenching consisted of a 25m long trench (Trench 1) and a 35m long trench (Trench 2) alongside its western edge (at the north and south ends respectively), and one 20m long trench (Trench 3) 2m beyond its eastern edge. These were sited so as to avoid disturbance to the existing hockey pitch and to best sample those areas anticipated as coinciding with parch mark features observed on air photos (SEE Palmer; Appendix 1). The position of Trench 3 was also dictated by the need to avoid disturbance of the roots of a Lebanon cedar and a beech growing within the hedgerow boundary of gardens abutting the playing field on its eastern side.

Geology and topography

The site overlies the gravels of the 2nd Cam Terrace which in places lies at a shallow depth from surface (BGS Sheet 205 (2002) and info. from Head Groundsman, Leys School). The top of this terrace is typified by the presence of lenses of chalk-rich or 'marly' gravel, the gravel beds here overlying the Chalk Marl and Gault Clay outcrops which underlie the western edge of the floodplain of the former eastern branch of the River Cam (within what is now the much shallower Vicar's Brook/ Hobson's Brook valley). Similar chalky gravels have been encountered in test pits and evaluation trenches dug within the grounds of the former Meadowcroft Hotel which lies opposite this on the east side of Trumpington Road. Here the chalk has been redeposited, in places forming thin lenses or beds of tufa coinciding with spring lines (Timberlake 2006). The original gravels consist of coarse-fine flinty gravels and sands, in places with finer sand and silt bands.

The eastern part of the playing field consists of a moderately level grassed area (height between 11.16 and 11.32m OD) yet with some barely discernible evidence for north-south ridges and an only slightly more substantial NNE-SSW ridge, some 5m wide, the outline of which can just be made out crossing the field from the south.

Archaeological background

A moderately high density of archaeological sites and crop-marks have been identified within a 500m radius to the north and immediately to the south of the

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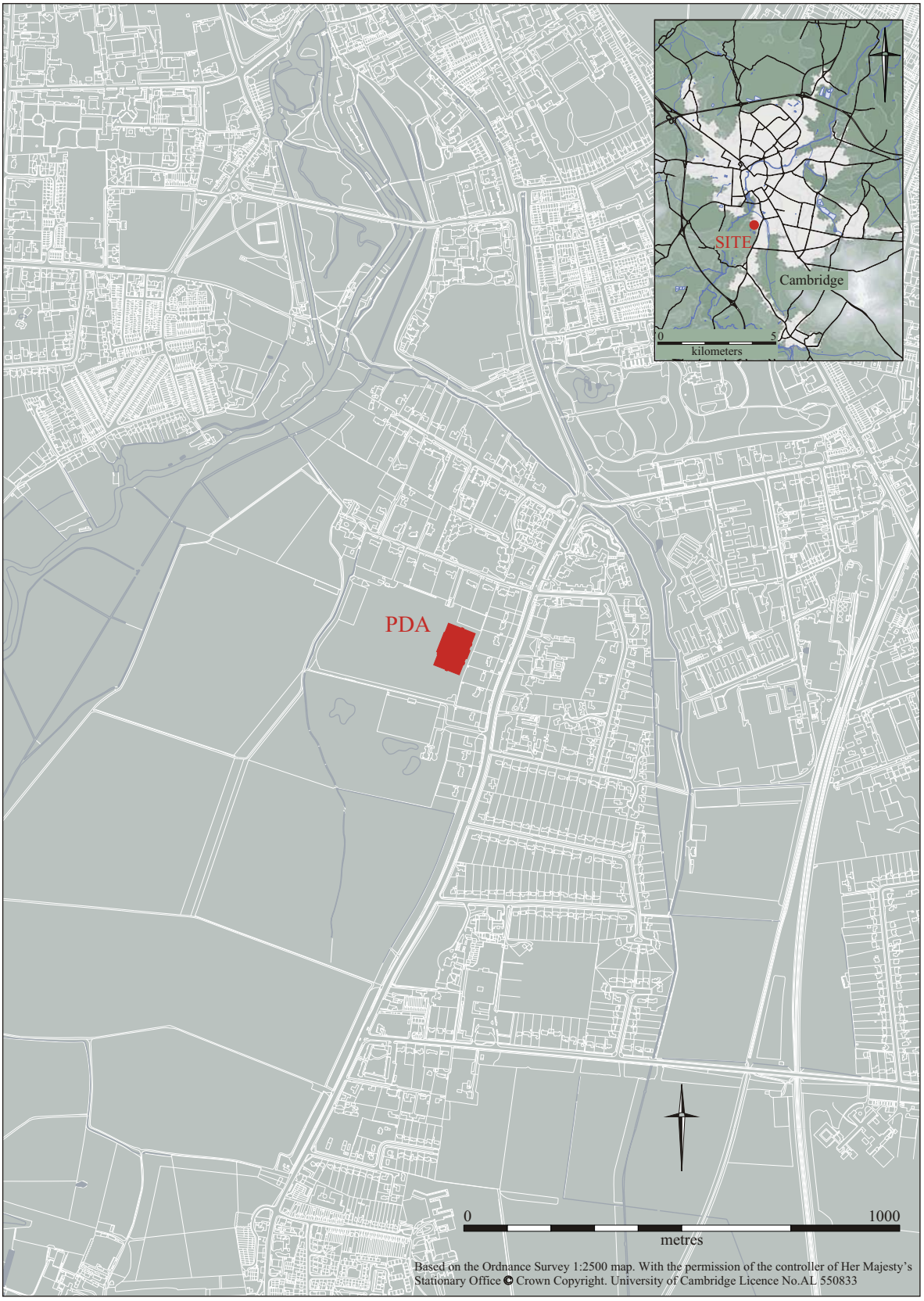

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Figure 1. Location map

playing field, encompassing the area from Cambridge Lakes Golf Course westwards to River Farm and the edge of the modern Cam floodplain, and north to Latham Close, Chaucer Road and the edge of Vicar's Brook.

A number of archaeological investigations have been undertaken within this area since 1991. This includes trench evaluations undertaken by CAU at Latham Close and Chaucer Road (Gdaniec 1991, Mackay 2004 & Len Tarkel 2005) and at the Meadowcroft Hotel, Trumpington Road (Timberlake 2006), an archaeological survey of the Cambridge Lakes Golf Course (Gdaniec 1994), plus a geophysical survey of a 1.2 hectare area on Lathams Road which was undertaken by Oxford Archaeotechnics in 2004 in connection with the Perse School Playing Field (Latham Close) archaeological evaluation (in Mackay 2004).

Possibly the earliest find from the area is of an undated 'prehistoric stone object' found in Chaucer Road in 1902 (HER 04869). Iron Age pottery was found whilst excavating the foundations of a house in Latham Road (HER 04799), whilst Iron Age coins were reported from a similar location (just to the east of the trackway access to the present playing field in the proximity of the present Vice-Chancellors' house) in 1923. Immediately to the west and south of here, aerial photographs reveal parch marks which suggest the presence of at least three distinct areas of rectilinear enclosures (HER 09601), a number of these within the area immediately to the south of the Leys School Sports Pavilion (HER 04866) and within 10-50m of the proposed hockey pitch (HER 09603) (SEE Figures 2&3). Within the greater area of crop and parch marks which extends to the west and south of River Farm, there appears to be some evidence for fields, trackways, and possibly even hut-circles (HER 05031). The parch mark identified above as a putative trackway is possibly the same one as that picked out crossing the Leys School playing field in a NW-SE direction south of the Sports Pavilion, and which disappears just to the west of the area of the current evaluation (SEE Figure 2). Another area of crop-marks which have been identified as possible rectilinear ditched enclosures overlain by headlands lies beneath the Trumpington Golf Course, a little more than 200-400m to the south-west of the development site. Further to the south towards Trumpington small relict patches of ridge and furrow have been detected on air photos (Gdaniec 1994). It would seem from the density and type of crop-marks that an Iron Age/Romano-British agricultural landscape extends from the river north-westwards along the east side of the Cam terrace towards the confluence of this with Vicar's Brook, the latter perhaps also associated with a major Iron Age to Roman trackway and a possible crossing point of the Cam between Newnham and Grantchester (Mackay 2004).

Significant Roman remains have been uncovered within the area of Latham Road and Chaucer Road. These include isolated finds of Roman coins (HER 04868) and pottery (HER 04689A; HER 05009; HER 05018; HER 04957), whilst excavations in 1910 recovered other significant finds including pottery, coins and bronze brooches associated with a Roman well (HER 05023) (Walker 1910). The 1886 1st Edition 1:2500 OS map shows a findspot of Roman coins within the middle of the west end of the field (no.238) south of Latham Road, the latter corresponding approximately to the area of the current playing field. A recent archaeological evaluation undertaken by CAU at the Perse School Playing Field off Latham Close has uncovered ditches with 3rd-4th century AD pot and evidence for building and small-scale industrial activity (iron working) nearby (Mackay 2004), whilst in 1719 an important Roman cemetery

was uncovered at Dam Hill just west of Latham Close during quarrying operations, the site lying approx. 100m south of Chaucer Road and 100m north of River Farm (Lethbridge et al. 1935). This produced a rich collection of bronze urns and pottery including imported amphora (HER 04956).

An Early Saxon cemetery with richly endowed burials was discovered prior to 1854 at 'Dam Hill' near Vicar's Brook, close to what is now the junction between Latham Road and Trumpington Road (HER 04955). Although no archaeological work has ever been carried out in this area, the Anglo-Saxon metalwork and jewellery recovered from this site during the 19th century proved to be exceptionally rich. The long brooches found here are amongst the earliest in the UK (Meaney,A. *A Gazetteer of Early Anglo-Saxon Burial Sites* 1964). Numerous artefacts of bronze, iron, crystal and glass were recovered; some of these finds now reside within the Museum of Archaeology & Anthropology in Cambridge, but all are poorly documented. The presumed site of this cemetery is less than 200m north-east of the playing field.

Medieval finds from the area are few. These consist of a medieval coin from Latham Road (HER 01650b), and examples of medieval ridge and furrow agriculture identified at Brooklands Avenue (Cooper 2004) and just to the south of Cambridge Lakes (Gdaniec 1994). More vague crop-mark evidence for headlands, possibly that associated with former medieval field strips, have been identified much closer to the area of current evaluation (R.Palmer in Gdaniec 1994)

Several pre-19th century post-medieval monuments and/or sites are to be found within 500m of the current evaluation. The most important upstanding remains close to the site are those of the 17th century Hobson's Conduit (HER 04529a) and Hobson Conduit Bridges (HER 04529b) to the north of here on the Trumpington Road, immediately adjacent to the Botanic Gardens. Meanwhile, evidence for the extensive remains of 18th-19th century (?) gravel quarrying has been proved within the area of Latham Close, some of this being large pits and some small, separated by narrow gravel ridges (Mackay 2004). This seems to have largely truncated any earlier archaeology within this area. Crop and parch mark evidence suggests that this area of quarrying spreads both east and south-west towards River Farm and the westernmost end of the Leys School Playing Field, and it is quite conceivable that some of this quarrying may be earlier. A small evaluation undertaken within the gardens of an MRC building at no.15 Chaucer Road in 2005 identified a further area of 18th to 19th century gravel quarrying, extending this zone of exploitation to the north-west (Ten Harkel 2005).

Baker's 1830 map of Cambridge shows an area of horticulture and greenhouses on the north side of Latham Road which is referred to as the 'Cambridge Nursery', the road at that time being little more than a track leading to Blackland Farm (later River Farm), with a large open field to the south, and a narrow strip of woodland bordering the west side of Trumpington Road. The housing development in the area of Chaucer Road and Latham Road took place after that of the villas on Trumpington Road (Timberlake 2006), that on Chaucer Road starting around 1883, but on Latham Road not until the 1900s (between 1900 and 1920 (VCH 1982; Renfrew 1996). Prior to the construction of the school playing field there appear to have been allotments in this area.

Archaeological test-pitting prior to evaluation (August 2007)

On Tuesday 21st August 2007 three 0.5m diameter test pits were dug by hand across the eastern edge of the St. Faith's/ Leys School grass playing field within a 100m x 60m area proposed for the development of an all-weather Astro-Turf covered hockey pitch. The location of these pits followed a diagonal N-S line across the site of the proposed pitch, from one corner to the other, the first two spaced approx. 30 m apart, with the latter some 50-60m south of this, and some 10-20m from the SE corner (Figure 3). This followed the direction of presumed shallowing of the sub-soil and topsoil southwards towards the southern edge.

Test Pit 1 at the north end of the site revealed up to 0.25m of dark grey-black topsoil beneath grass, with a lighter and slightly sandier horizon at its base. This contained moderate amounts of late Victorian/ early 20th century debris typical of garden soils; broken stems of clay tobacco pipes, a small amount of willow pattern and salt-glaze china, broken brick and tile. Beneath this, between 0.20-0.25m and 0.5m depth, an upper sub-soil horizon consisting of light-mid brown sandy silt with occasional flint gravel and pebbles contained smaller amounts of heavily abraded ceramic including poorly fired Late Medieval – Post-medieval roof tile (probably not earlier than 14th century), oyster shell, and small fragments of coal, and showed evidence of root penetration from above, plus some suggestion of internal bioturbation. This merged into a lower sub-soil horizon (0.5 – 0.7m) consisting of a finer mid-brown sandy silt with occasional flint, and further evidence of bioturbation. The only finds recovered from this were scatters of rolled and slightly burnt (reddened) flint, a single piece of unabraded calcined flint, and some worn fragments of oyster shell. Underneath lay a layer of what appeared to be disturbed natural. This consisted of a wedge of angular – sub-rounded flint pebble clasts (<5 cm) within a loose matrix of medium-coarse orange-brown sand (0.7-0.85m), and below this a much looser light-orange brown sandy gravel with darker humic patches, the latter probably associated with former root holes. No finds were recovered. The undisturbed natural (a sandy gravel horizon) was encountered at a depth of around 0.95m. Both of the sub-soil layers and disturbed gravels were interpreted as being horizons of accumulated and/or worked soil, with the natural gravel and sand base beneath broken up through root activity or possibly by deep ploughing.

Test Pit 2 revealed a slightly greater depth of topsoil, the upper topsoil up to 0.2m deep, with a more compact lower sandy topsoil (0.15-0.3m) with worked-in pebbles of chalk, flint, charcoal, abraded brick, animal bone and oyster shell plus small sherds of Victorian china plate and clay pipe stem. Beneath this was a fairly clear boundary with the upper sub-soil horizon, the latter consisting of a compact mid-brown silty sand with occasional rounded – sub-angular flint clasts and gravel (0.3 – 0.45m). This contained similarly abraded fragments of peg tile plus a few sherds of red oxidised coarseware pot, most of this probably early Post-medieval rather than Medieval in date. The lower sub-soil (0.4 – 0.85m) consisted of a much looser mid-dark brown sandy silt with rarer <1cm flint gravel clasts and evidence of extensive root penetration and mixing. This layer was devoid of finds apart from a single abraded sherd of a sooted pot with a similar red oxidised fabric (possibly Late Medieval – Post-medieval). A clear boundary was visible between this lower and an underlying

reddish-brown sand (natural), the latter containing only rare patches of gravel, yet defined by patches of iron concretions – reflecting iron panning surrounding the root holes. Apart from this contrast with Test Pit 1 (in terms of the nature of the underlying natural - perhaps a sand-filled palaeo-channel), the sub-soil sequence was otherwise pretty similar, suggesting a level base to disturbed agricultural soils which was probably of Late Medieval to Post-medieval date.

Test Pit 3 revealed approx 0.25m depth of topsoil with an uneven slightly gravely base and prominent root holes extending down into the subsoil, within which a smaller number of typical late 19th century finds (clay pipe stem, oyster shell and small crumbs of tile) were found. The soil profile here was not so much indicative of a cultivated garden soil garden as of an area of grass penetrated by roots of shrubs and trees, the site being relatively close to the hedge and playing field boundary. Beneath this the shallow upper sub-soil (0.2 – 0.35m) was compact and clay-rich, its appearance here suggesting a leached soil horizon rather than an earlier cultivation layer, a fact also supported by the recovery of very similar 19th century debris (clay pipe stem). The lower sub-soil (0.35 – 0.75m) was similar to the corresponding layer in Test Pit 2, some 50-60m to the north of this, yet here it produced nothing in the way of abraded ceramic finds, instead a fair amount of reddened (burnt) and fractured flint. Likewise the underlying natural (a loose orange-brown sand) was similar to that in Test Pit 2, although here this was furrowed by former (horizontal) tree root holes and was substantially shallower (0.6-0.75m).

Methodology

Three evaluation trenches which lay parallel to and alongside the outer (NNE-SSW aligned) edges of the footprint for the new pitch were sited to avoid existing tree roots, and partly to intersect crop-marks, thus sample putative archaeological features. The trenches (Trench 1 – 25m x 2m, Trench 2 – 35m x 2m and Trench 3 – 20m x 2m) provided a combined sample area of 160 sq m, or 3% of the footprint area of the pitch (0.6 hectare). The location of these trenches (Figure 3) was decided upon in a Project Specification for Archaeological Evaluation agreed by the client (St.Faiths School) and provided by CAU (Standring 2007), and was based upon a brief supplied by the Archaeology Section of CAPCA, Cambs. CC.

The trenches were excavated under archaeological supervision using a 360° 7-ton tracked machine with a 1.3 m wide toothless bucket on 1st October 2007, after first scanning for services using a CAT scanner and metal detector. The turf and topsoil layers were stripped and dumped separately from the sub-soil for ease of backfilling and re-instatement. A representative sample of the sub-soil from all three trenches was scanned by eye and also by metal detector for artefacts. Excavation of any possible archaeological/geological features (half or quarter-sectioned) was carried out by hand. The photographic archive comprised colour digital images, whilst plan and section recording consisted of measured sketch plans drawn at 1:100 and measured sketch sections drawn at 1:20 scale within the site notebook. All work was carried out in strict accordance with Health and Safety legislation and with recommendations of SCAUM (Allen & Holt 2002). The site code was SFS07.

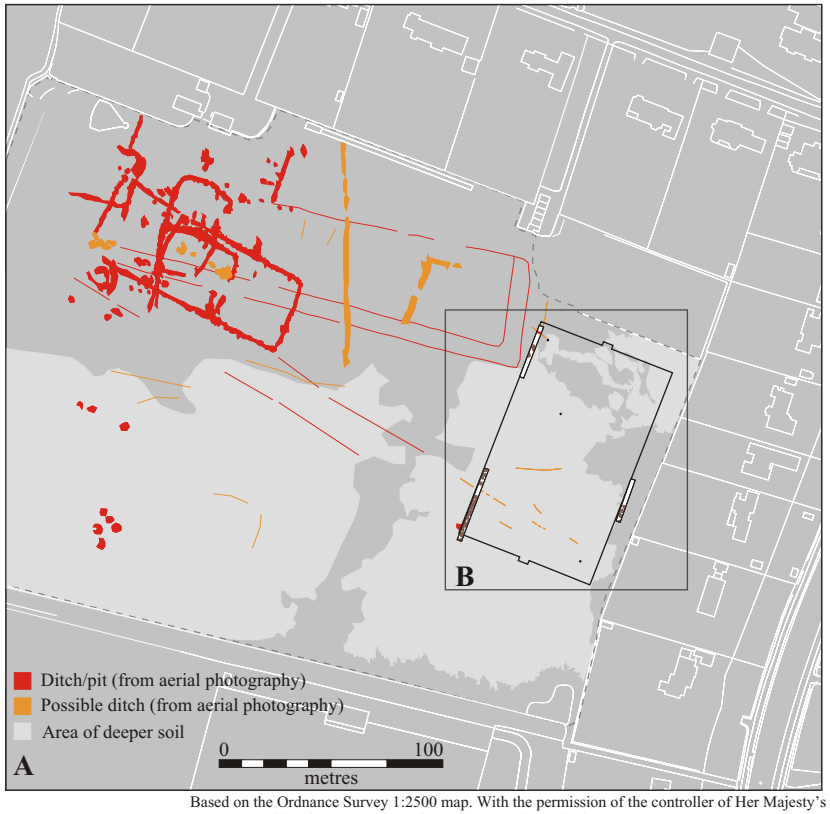


Figure 2. Features identified on aerial photograph

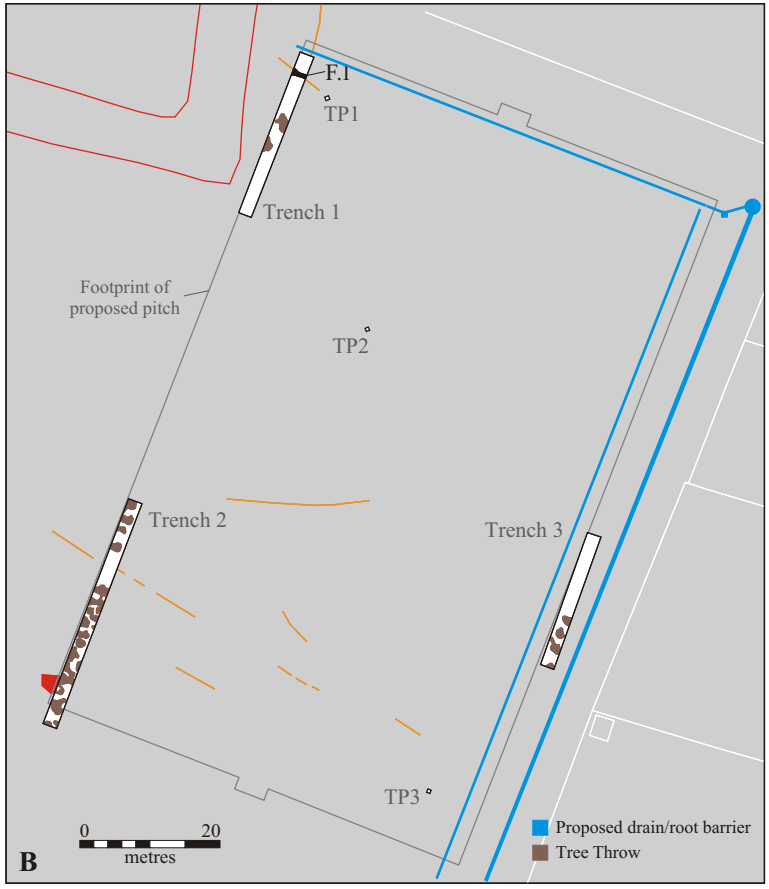
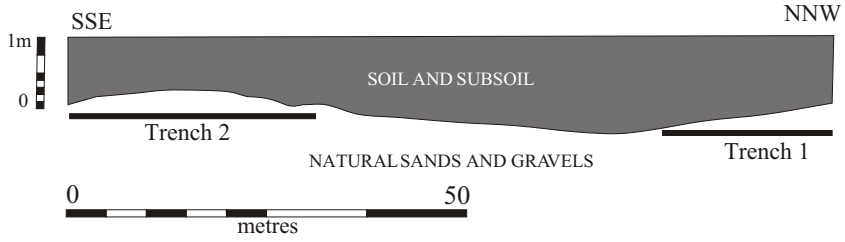


Figure 3. Footprint of proposed hockey pitch and trench plans



Landscape profile

Figure 4. Landscape profile between Trenches 1 and 2

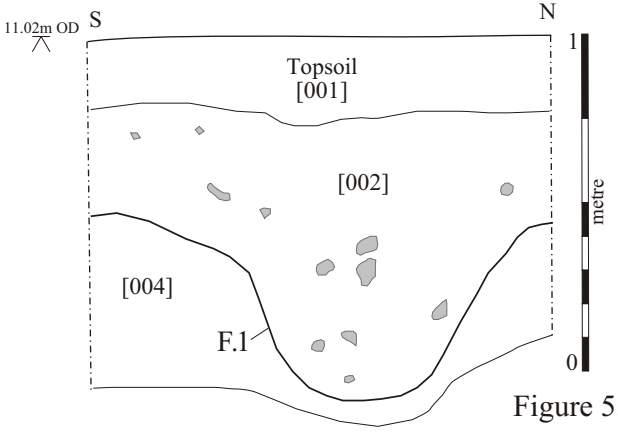


Figure 5. Section across F.1

Results

The three evaluation trenches revealed no archaeological features or deposits recognisable as being earlier than 19th century. A single NW-SE aligned ditch feature (**F.1**) identified within the north end of Trench 1 appeared to cut the upper as well as the lower sub-soil layers, and was most likely to be modern, all the remaining 'features' encountered here being tree-throws. In spite of the greater area of trenching, no pottery or other datable artefacts were recovered from any of the layers apart from the uppermost (late Victorian) topsoil.

Four distinct soil and sub-soil horizons were recognized within all three trenches, these consisting of: (001) a dark grey-black silty and humic topsoil containing small to moderate amounts of late 19th century brick and tile, animal bone, iron nails, pottery, bottle glass and clay pipe stem; (002) an upper sub-soil of mid-brown silt to fine sand with flint pebbles and the very occasional crushed tile fragment, fleck of charcoal or coal, some of this associated with a well-defined root zone; (003) the uppermost lower sub-soil horizon (not present throughout) which here is composed of a reddish-brown fine-medium sand similar to the basal sub-soil but with little gravel and very few pebble-sized flint clasts; and finally (004), a basal sub-soil consisting of a loose red-brown sandy gravel with sub-angular to rounded flint pebbles, some of the latter forming more distinct stony lenses, perhaps even in some cases a re-deposited natural.

Underlying this the natural geology here consisted of bands of light to dark yellow sand interbedded with numerous lenses of fine to coarse pebbly gravels, the latter ranging in colour from white (chalky) to orange-red.

Trench 1

This provided a NNE-SSW section through what appeared to be the side of a gently sloping depression in the natural which probably reached its deepest point some 10m or so to the south of the south end of the trench (Figure 4). The depth to natural at this end of the trench was about 1.5m. There was no obvious evidence for truncation, however at the north end sub-soil horizon (003) appears to be missing and the 'disturbed' gravel horizon (004) is much more thickly developed. Nevertheless, despite some similarities between the latter and the 'ballast' horizons typified by gravel quarry backfill, no evidence for quarrying, nor indeed of any pits cut into the underlying natural could be detected. The single 'U' shaped 'ditch' feature (**F.1**) cut from the top of horizon (004) appears just to touch the top of the natural (approx. 3m from the north end (Figure 3)) The cut of this can just be made out showing on the surface of the underlying sands, the entire fill of this feature in section (Figure 5) consisting of the upper sub-soil (002), suggesting a probable slow and gradual infill of an open ditch or hollow. Apart from its assumed linearity and correspondence to an observed parch mark, the section is much more typical of a tree-throw than a ditch. If a feature, then this has been very roughly cut and would appear to be modern. No finds were recovered from this. The base of two tree-throws can be seen in the bottom mid-part of the trench. At least one of these throws can be seen in section up to the level of the base of the sub-soil, once again this implies a relatively modern date.

Trench 2

The base of the trench was uneven and the depth to natural here variable (between 0.9m and 1.2m deep), though clearly shallower than in Trench 1, and evidently now on the south side of this gently sloping east-west soil-filled depression or hollow within the underlying land surface. Up to 13 tree-throws were visible along the length of this 35m long trench, with a greater density at the south end (Figure 3). Most of these appear to have been growing at the same level, and clearly cut through the sub-soil; in these places the (002) and sometimes the (003) horizons were sometimes absent, the bases of the tree boles penetrating the top of the natural sands and gravels to a depth of up to 0.7m below the base of the topsoil. The base of these tree bole 'features' were sampled in places, but no finds such as residual worked flint or burnt flint etc. were encountered. The lack of burnt flint and the relatively high level of the outline of the bole hollows (here defined by a dark humic ring and root holes around the perimeter of the throws) implies that these are most likely to have been 'modern' trees, perhaps medieval to post-medieval in date. However, a few of the tree throws were evidently much earlier, and had been cut by later ones. The density of such 'features' suggests a moderately well wooded area. No evidence for quarrying, or even of cultivation (i.e. plough ridges or cuts) could be seen anywhere along the exposed trench section(s).

Trench 3

Observed 'features' within this trench located on the east side of the pitch were limited to three tree throws (less than 10m from the hedge line and trees bordering the end of the gardens on Trumpington Road). However, at least two of these tree throws appear to have been located on the sites of earlier tree boles, and thus possess a quite different basal fill, part of this buried by the later sub-soil. These could be distinguished from the more modern tree throw fills by the presence of darker brown clay-rich silts containing a coarse angular flint gravel, occasional slightly burnt (reddened) flint and rare flecks of charcoal (005). These deposits were sampled, but no artefacts were found. More modern tree roots appear to have penetrated these from above.

Discussion

Although the evaluation clearly failed to find evidence for the eastward continuation of the suspected Iron Age/ Romano-British settlement or enclosures indicated by parch marks beneath the west end of the playing field, it has confirmed the presence of both deep and disturbed soils within this area, something which may help to explain the overall lack of archaeological survival.

Rather than quarrying being responsible it would appear that some sort of continuity of dense woodland within this area (at least from the post-medieval to early modern period) has in effect contributed to the piecemeal truncation of archaeological features *above* the top of the surviving natural (at approx. 1m depth). Thus the area of 'deeper soil' indicated on the air photos (SEE Figure 2) fairly well reflects the approximate extent of this 'basin' of former woodland soil which has been broken up by deep-seated roots and tree boles. The result of all this is that parch marks survive only as

relicts or 'islands' linked to former and much shallower archaeological features. To some extent this conforms to what we see on the air photos in terms of the survival of tiny distorted fragments of parch mark, an example of this being the projected continuation of the double-ditched (?) trackway which was thought to cross the south end of the proposed pitch. In actual fact, at the places where the crop-mark features are supposed to intersect these trench sections (such as in the north and south ends of Trench 2; a trackway ditch and pit respectively) they are simply unrecognisable. Given the almost complete dissection of the sub-topsoil horizons by generations of tree-throws, this is not altogether surprising. However, the complete absence of Iron Age or Romano-British/Roman finds such as pottery sherds from any of these disturbed horizons remains something of an enigma. Indeed, the non-recovery of dateable finds from the sub-soil horizons during this evaluation phase has been problematic, the only indication of a possible date being sherds of Late Medieval or early post-medieval pot and tile recovered from the three test pits hand-dug in August 2007, the latter probably derived from horizons equivalent to the top two sub-soil layers (002) and (003).

The interpretation of the only recognisable feature, that of a possible ditch (F.1) located at the north end of Trench 1, continues to remain ambiguous. At best this can be explained by the disturbance caused to a short linear feature as a result of cultivation activity, or more likely to the distortion of this inflicted by the presence of a nearby tree bole or roots. As this feature appears to have been cut into the sub-soil, and also filled by it (002), there is little justification here for considering its associated parch mark a feature which might be related in some way to the possible Iron Age/ Romano-British (?) aligned rectilinear enclosure which is indicated on the air photos a matter of only a few metres to the west. This is supported by the presence of both coal and late post-medieval pottery within this same horizon elsewhere, suggesting most probably an 18th-19th century date. However, there seems to be no indication of the gravel quarrying seen both at Latham Close and Chaucer Road. Nevertheless, a short trench such as this cut to the level of the natural could be seen as a prospecting trench sunk to determine the depth to gravel. That aside, it still seems very unlikely that the disturbed layers of gravel in the sub-soil here (003) could in any way be related to quarrying, either as natural slumped-in infill, backfill, or else as landfill make-up of quarry waste from elsewhere imported to level-up and help drain this area of land.

The existence of former medieval or early post-medieval fields within this area has not been confirmed by the results of this evaluation. However, the presence of a mixture of small abraded sherds of Late Medieval/ early Post-medieval pot and tile within the upper sub-soil layers may indicate manuring activity and plough disturbance. This would also seem to tally with the interpretation of this area either side of the Trumpington – Cambridge road and in the north part of Trumpington Parish as including strips for medieval cultivation (Timberlake 2006, Gdaniec 1994). The evidence for relict ridge and furrow south of Cambridge Lakes, and for the presence of possible headlands within the golf course area immediately to the south of the playing field would seem to suggest that this activity extended this way. The depth of soil encountered along the west side of the pitch plus the faint outline of a NNE-SSW beyond may infer the continuation of one of these headlands northwards. Given the amount of subsequent tree disturbance and recent levelling it is now difficult to be certain either way.

Between 1830 and 1901 the area of the current playing field is shown as a large open field with a border of well developed (mature) woodland approx. 30m wide bordering the west side of Trumpington Road. The complete absence of trees within the area in question suggests that both the tree throws and evidence for woodland that has been found pre-dates the early 19th century. The date of the formal laying out of the school playing field by contrast considerably post-dates this. Map evidence suggests that this was constructed sometime between 1960 and 1965. However, aerial photography seems to imply a sporting use of this field probably from the 1940s onwards. The thick dark cultivation soil (topsoil), together with its abundant evidence for late 19th century domestic refuse, probably dates to the 1880s following the first construction of villa residences in the neighbourhood, north of Latham Close and within the Chaucer Road area and east of Trumpington Road. Allotments appear to have been constructed, but only against the western edge of this field sometime around the 1920s. It is quite unlikely that these will have had any sort of impact on the soils at the east end, unless of course there was a brief period of increased cultivation and extension of the allotment area eastwards, perhaps for a few years during the early 1940s.

In conclusion, the interpretation of the early history of this site remains ambiguous. Nevertheless, despite the absence of archaeology at this particular location, the potential for archaeological discovery a matter of only 20-30 metres west of this site is a near certainty, with promising looking crop-marks and less evidence for deep soil accumulation and disturbance or of surface truncation of features on shallowly outcropping natural.

Acknowledgements

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Maps:
Baker's 1830 map of Cambridge
1886-1888 1:2500 map of Cambridge (Trumpington)
1889-1891 1st. edition OS 1:2500 map

N.B. HER 04955 = Historic Environment Record no. (CCC)

APPENDIX

ST FAITH'S PLAYING FIELD,
CAMBRIDGE, TL448566,
CAMBRIDGESHIRE:
AERIAL PHOTOGRAPHIC ASSESSMENT

Rog Palmer MA MIFA and Alma Ziemele BA

SUMMARY

This assessment of aerial photographs examined an area of some 7 hectares (centred TL448566) in order to identify and accurately map archaeological, recent and natural features.

The playing field has been sufficiently dry in at least three years for its grass to indicate the presence of buried ditches. These include enclosures and other features that show at least three phases of construction, some of which may relate to other archaeological features mapped to the west and north-west.

Deeper soil covers much of the southern part of the playing field and is likely to mask indications of any archaeological features therein.

The level of interpretation and mapping was to be at 1:2500.

INTRODUCTION

This assessment of aerial photographs was commissioned to examine an area of some 7 hectares (centred TL448566) in order to identify and accurately map archaeological, recent and natural features and thus provide a guide for field evaluation. The level of interpretation and mapping was to be at 1:2500.

ARCHAEOLOGICAL AND NATURAL FEATURES FROM AERIAL PHOTOGRAPHS

Grass fields, such as the St Faith's playing field, sometimes show sub-surface features through the withering (parching) or differential growth of the plants above them towards the end of very dry summers. Notable dry summers occurred in Britain in 1949, 1959, 1975, 1976, 1984, 1989 and 1990 (Bewley 1994, 25) and more recently in 1995, 1996 and 2006. This does not imply that every grass field will reveal its buried remains on these dates as local variations in weather and field management will affect parching. However, it does provide a list of principal years in which photographs taken from, say, mid July to the end of August may prove informative.

Such effects are not confined only to archaeological features. Any disturbance of soil and bedrock can produce its own range of shadow, crop and soil differences as can some land management strategies – and it is hoped that a photo interpreter, especially

one familiar with local soils, is able to distinguish archaeological from other features. There may, however, remain some features of unknown origin that cannot be classified without specialist knowledge or input from field investigation.

PHOTO INTERPRETATION AND MAPPING

Photographs examined

The most immediately informative aerial photographs of archaeological subjects tend to be those resulting from observer-directed flights. This activity is usually undertaken by an experienced archaeological observer who will fly at seasons and times of day when optimum results are expected. Oblique photographs, taken using a hand-held camera, are the usual products of such investigation. Although oblique photographs are able to provide a very detailed view, they are biased in providing a record that is mainly of features noticed by the observer, understood, and thought to be of archaeological relevance. To be able to map accurately from these photographs it is necessary that they have been taken from a sufficient height to include surrounding control information.

Vertical photographs cover the whole of Britain and can provide scenes on a series of dates between (usually) 1946-7 and the present. Many of these vertical surveys were not flown at times of year that are best to record the archaeological features sought for this Assessment and may have been taken at inappropriate dates to record crop and soil responses that may be seen above sub-surface features. Vertical photographs are taken by a camera fixed inside an aircraft and with its exposures timed to take a series of overlapping views that can be examined stereoscopically. They are often of relatively small scale and their interpretation requires higher perceptive powers and a more cautious approach than that necessary for examination of obliques. Use of these small-scale images can also lead to errors of location and size when they are rectified or re-scaled to match a larger map scale.

Cover searches were obtained from the Cambridge University Collection of Aerial Photographs (CUCAP) and the National Monuments Record: Air Photographs (NMRAP), Swindon. Additional vertical photographs from a Luftwaffe flight on 31 August 1940 were provided by Robin Standring, CAU. Photographs included those resulting from observer-directed flights and routine vertical surveys.

Photographs consulted are listed in the Appendix to this report.

Base maps

Digital data from original survey at 1:2500 or greater scale were provided.

Study area

A previous Assessment (Palmer 1994) examined land south and west of the playing field and was considered adequate to provide local context.

Photo interpretation and mapping

Photographs were examined by eye and under slight (2x) magnification, viewing them as stereoscopic pairs when possible. A scanned digital copy of the most informative was transformed to match the digital data using the specialist program AirPhoto (Scollar 2002). The scanned photograph was enhanced using the default setting in AirPhoto before being examined on screen. The transformed file was then set as a background layer in AutoCAD Map, where features were overdrawn, making reference to the original prints, using standard conventions. Layers from this final drawing have been used to prepare Figure 6 in this report and have been supplied to the client in digital form. Photo interpretation and drawing was undertaken by Alma Ziemele under Rog Palmer's supervision.

The majority of the mapped information came from oblique photographs taken by CUCAP in 1975. This was confirmed, and slightly enhanced, by two other photographs at NMRC.

Accuracy

AirPhoto computes values for mismatches of control points on the photograph and map. In all transformations prepared for this assessment the mean mismatches were less than ±1.50m. These mismatches can be less than the survey accuracy of the base maps themselves and users should be aware of the published figures for the accuracy of large scale maps and thus the need to relate these mismatches to the Expected Accuracy of the Ordnance Survey maps from which control information was taken (OS 2007). Mapping originally undertaken at 1:10000 does not have the inherent accuracy to be used to locate features on the ground with precision.

COMMENTARY

Soils

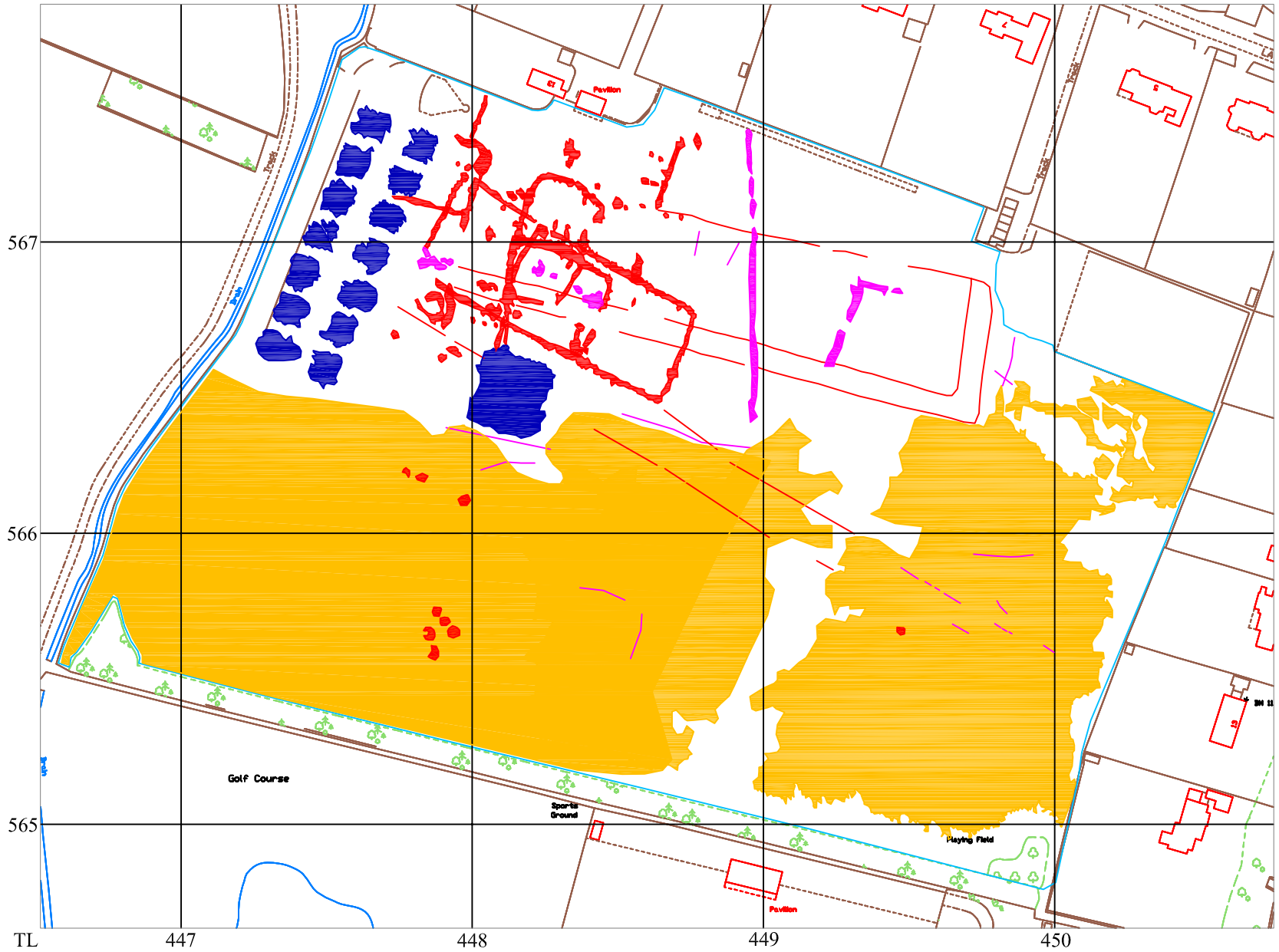
The Soil Survey of England and Wales (SSEW 1983) shows the area to lie on chalky drift and chalk (soil association 511e: SWAFFHAM PRIOR) – on which crops respond well to variations in soil depth such as may be due to cut archaeological features.

Archaeological features

Ditched features of at least three phases of occupation have been identified. They can be divided into two 'types' on the basis of the surface indications above their ditches: some being mostly of broad and slightly irregular form, the other of narrower and straighter ditches.

The former are grouped in the north-west part of the field and are on a similar axis to features mapped in 1994 to the north-west (Palmer 1994) although the latter appear to be more regular and rectangular in shape. Within the group in the playing field are features that are superimposed and thus likely to indicate two phases of design. Pits tend to cluster in and around these enclosures and the whole group may be linked to what may be a very broad ditched track on the south side of the enclosures. The alignment of that track continues to the west but, if joined, the track would need to make a dog-leg turn in the west part of the playing field that is under the grass tennis courts and has not been visible on any of the aerial photographs examined.

Figure 6. Features identified on aerial photgraphs



Area examined

Archaeological features
Ditch or pit
Possible ditch

Natural features
Deeper soil

Recent features
Grass maintenance

Original photo interpretation and mapping at 1:2500 based on photographs at CUCAP/ULM and NMRC.
Air Photo Services Cambridge
August 2007
Drawing: 0713StFaith.dwg

In the playing field, the ditches of that track are narrow as are others to their north that make the third phase of enclosure that has been mapped. These ditches make three sides of a large rectangular enclosure(?) of which the south and east sides have broad-spaced double ditches.

In most cases where features are below the ground surface, information on aerial photographs does not inform reliably about the order of construction of features and none can be suggested within the playing field.

A small number of pits plus some possible ditches have been identified within the area of deeper soil (see below). It is possible that more archaeological features are present within this area than have been recorded on the few dates when the grass has been responsive to sub-surface variations of depth.

Non-archaeological features

Most aerial photographs taken on dates when there is any change recorded on the playing field surface suggest there to be deeper soil (of varying extents) in the southern part of the field. This has been mapped at its maximum area and identifies an area within which archaeological features are unlikely to be visible as the grass responds more readily to changes in the overall depth of soil in preference to any features that may have been cut into it.

Smaller patches, showing very darkly on photographs seem likely to be areas where worn grass has been treated over the summer holiday period on a cricket pitch and row of grass tennis courts on the west side of the playing field. These have been mapped as, like the deeper soil, they indicate areas in which archaeological information would remain invisible.

Land use

The land has been in use as a playing field on all dates of photography.

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Vertical photographs

PHOTO_ID	*PHOTO_DATE*	*PHOTO_SUBJ*	*COVER_TRACE*	*SCALE*	*NGRE*	*NGRN*
V-E096	.28 Nov 2 B.C. .	Cambridge	60_018	5100	544834	257410
V-R036	.28 Nov 2 B.C. .	Cambridge	61_014	5500	544785	257551
V-R037	.28 Nov 2 B.C. .	Cambridge	61_014	5500	544777	257356
V-DE060	.28 Nov 2 B.C. .	Cambridge	66_002	3200	544931	257530
RC8A091	.28 Nov 2 B.C. .	Cambridge	67_023	5750	544034	257438
RC8B139	.25 Sep 1967	Cambridge	67_109	10140	544508	257109
VKL129	.28 Nov 2 B.C. .	Cambridge City	67_c010	7000	544571	257471
VKL130	.28 Nov 2 B.C. .	Cambridge City	67_c010	7000	544502	256991
RC8E268	.28 Nov 2 B.C. .	Cambridge	68_105	6000	544612	256781
RC8E269	.28 Nov 2 B.C. .	Cambridge	68_105	6000	544295	257237
RC8AN049	11 Dec 1973 .	Cambridge	73_175	3900	545065	257554
RC8AN061	11 Dec 1973 .	Cambridge	73_175	3900	544983	256553
RC8AN062	11 Dec 1973 .	Cambridge	73_175	3900	544693	256790
RC8AN063	11 Dec 1973 .	Cambridge	73_175	3900	544403	257027
RC8AN064	11 Dec 1973 .	Cambridge	73_175	3900	544114	257264
RC8AQ231	18 Jul 1974 .	Cambridge	74_064	11900	544145	257186
RC8BA151	11 Jun 1975 .	Cambridge	75_062	6200	544686	257210
RC8DM079	11 Jul 1980 .	Cambridge survey	80_033	5000	545079	256981
RC8DM080	11 Jul 1980 .	Cambridge survey	80_033	5000	544673	257152
RC8DM081	11 Jul 1980 .	Cambridge survey	80_033	5000	544267	257322

Source: National Monuments Record: Air Photographs (cover search 17655)

Specialist collection

TL4456/1/222-224	19 June 1970
TL4456/1/225-226	19 June 1970
TL4456/6/263-264	1 August 1975
TL4456/7	2 August 1977
TL4456/8/454-456	25 July 1979

Vertical collection

US/7PH/GP/LOC285: 5026-5027	19 April 1944	1:12500
RAF/106G/UK/820: 3090-3092	21 September 1945	1:5000
RAF/106G/UK/1490: 3047-3048	9 May 1946	1:10000
RAF/106G/UK/1718: 3086-3087	6 September 1946	1:9800
RAF/106G/UK/1718: 4086-4087	6 September 1946	1:9800
RAF/CPE/UK/2312: 5036-5039	16 September 1947	1:4800
RAF/540/706: 5008-5011	9 April 1952	1:5100
RAF/58/866: 6012-6013	30 April 1947	1:4920
OS/52R32: 99-100	23 May 1952	1:8000
RAF/540/775: 5005-5007	17 June 1952	1:5000
RAF/58/1119/F21: 102-103	11 May 1953	1:10000

RAF/540/1143/F22: 69-71	9 June 1953	1:10000
RAF/543/T/899/F22: 125	5 May 1960	1:10000
RAF/58/4271/F22: 35-39	27 March 1961	1:5000
RAF/58/4276/F22: 66-67	28 March 1961	1:5000
RAF/58/4438/F21: 59-60	5 June 1961	1:10500
OS/67145: 124	5 June 1967	1:7500
MAL/68038: 200-201	2 June 1968	1:11000
MAL/69070: 81-82	22 July 1969	1:10500
HSL/UK/75/34: 2576-2577	undated 1975	1:11000
OS/92379: 15-16	29 July 1992	1:8200

Most informative photographs

BVQ 66-67
TL4456/6/263-264
TL4456/7