



cambridgeshirearchaeology archaeological field unit

CAM ARC Report Number 1005

Medieval Remains at 15 & 42 Kingfisher Drive, Burwell, Cambs

Excavation Report

Spencer Cooper and Aileen Connor

June 2008

Commissioned by Construct Reason Limited

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Excavation Report

Spencer Cooper HND, BA and Aileen Connor BA AIFA With contributions by Chris Faine MA, MSc, Carole Fletcher HND, BA, Rachel Fosberry HNC and Chris Rolfe BSc.

Site Code BURKFD 07 CHER Event Number: ECB 2594 Date of works: May 2007 Grid Ref: TL 5859 6752

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PROJECT DETAILS								
Project name	Kingfisher Drive, Burw	ell						
Short description	An archaeological excavation identified activity from the prehistoric period through to the post-medieval. Prehistoric features included a four post structure and very truncated possible round house. Medieval features included a canal (lode), a possible dovecote, field barn and fish tank or tanks, localised quarrying and boundary ditches.							
Project dates	Start 14/5/08		End 15/06/08					
Previous work	Evaluation M. Muldov Remains on Land Adja Kingfisher Drive Burwe	vney Medieval acent to No 14 and 42 ell Cambridge	Future work	yes/no/unknown No				
Associated project reference codes	BUR KFD 07, CHER E	CB 2594						
Type of project	Excavation							
Site status	e.g. none, SAM, LB -	NONE						
Current land use (list all that apply)	Open ground/ former g	arden plot						
Planned development	Residential							
Monument types / period (list all that apply and use thesaurus of monument types)	Canal (lode), Extraction Boundary ditches	Canal (lode), Extraction pits, dovecote, fish tank, field barn Boundary ditches						
Artefact type / period (list all that apply and use <u>MDA</u> <u>object thesaurus</u>)	Pottery 13th-14th century Pottery 15th-17th century Worked flints prehistoric							
PROJECT LOCATION	1							
County	Cambridgeshire	Parish	Burv	vell				
HER for region	Cambridgeshire							
Site address (including postcode)	Land adjacent to 15 ar	nd 42 Kingfisher Drive I	Burwell					
Study area (sq.m or ha)	1350 sq m							
National grid reference	Easting (6 figure)	558590	Northing (6 fig)	265720				
Height OD	Max OD	3.09	Min OD	5.04				
PROJECT ORIGINATORS								
Organisation	Cambridgeshire Count	y Council, CAM ARC						
Project brief originator	Kasia Gdaniec, CAPC	A						
Project design originator	Aileen Connor							
Director/supervisor	Spencer Cooper							
Project manager	Aileen Connor							
Sponsor or funding body	Construct Reason Lim	ited						
ARCHIVES	Location and accessi	ion number	Content (e.g. pott database, contex	ery, animal bone, t sheets etc)				
Physical	CAM ARC BUR KFD 0)7	Pottery, animal boi worked flint	nes, metal finds, cbm,				
Paper	CAM ARC BUR KFD 0)7	Context sheets, inc sections, photogra	dices, drawn plans and phs				
Digital	CAM ARC BUR KFD 0)7	Photographs, data	base, illustrations				
BIBLIOGRAPHY	-							
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Summary

Between 14th May and 15th June 2007 an archaeological excavation was undertaken by CAM ARC (formerly Archaeological Field Unit of Cambridgeshire County Council) on land adjacent to Kingfisher Drive Burwell (NGR TL 5859 6752) in advance of the redevelopment of the area for housing. This excavation followed an evaluation that was undertaken in February 2007 (Muldowney 2007).

An area of 75m by 18m was stripped of topsoil to the north of a backfilled spur lode (canal) leading to the Weirs, an extant waterway that joins Burwell Lode to the north and forms the western boundary of the subject site. Medieval and post medieval remains included structures that may have been a fish tank and a dovecote, as well as a barn or other out buildings, boundary ditches, quarry pits and a spur lode or canal. Prehistoric activity is attested by the presence of a small number of worked flints, as well as pits and post hole structures that could relate to the prehistoric period.

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1 Introduction

Between 14th May and 15th June 2007 an archaeological excavation was undertaken by CAM ARC (formerly Archaeological Field Unit of Cambridgeshire County Council) on land adjacent to Kingfisher Drive, Burwell. The evaluation (Muldowney 2007) revealed significant medieval features to the north of a backfilled ditch (a probable spur lode or canal), as a consequence further archaeological investigation was required on the ditch itself and the area to the north of it in order to fulfil an archaeological condition placed on planning consent (04/00163/FUM) as outlined in the "Brief for Archaeological Investigation" (April 12th 2007) issued by the Cambridgeshire Archaeological Planning and Countryside Advice Team (CAPCA).

The site archive is currently held by CAM ARC and will be deposited with the appropriate county store in due course.

2 Geology and Topography

The site is located approximately 20km to the north-east of Cambridge, in the village of Burwell. The parish of Burwell is located to the northeast of the Devil's Dyke and includes high sandy heathland, chalk slopes and peat fen (Hall 1996, 102). The underlying geology is the West Melbury Marly Chalk Formation (upper chalk).

The subject site is bounded to the west by a large catchwater drain known as The Weirs and by residential and commercial premises to the north, east and south. At the time of excavation the plot was open ground/ former gardens behind properties fronting on to the western side of North Street.

3 Archaeological and Historical Background

3.1 Prehistoric

Evidence for prehistoric activity in the parish of Burwell is mainly confined to surface finds of flint tools including an ovate handaxe, tranchet axes and possible Mesolithic flints (Hall 1996, 102). There is also evidence for a number of round barrows, particularly on the higher ground in the south of the parish (*ibid*.) In 1969 an excavation (ECB1733) comprising trenches took place on land to the west of the Weirs and almost opposite the subject site (Browne 1977, 81-91). The excavation revealed evidence for late Neolithic/ Early Bronze Age

Evidence suggests that prehistoric occupation occurred along the chalk slopes of the fen-edge. Prehistoric remains from the village include:

stray finds of Palaeolithic, Mesolithic and Neolithic axes at Reach Road: Late Neolithic/earlier Bronze Age and late BronzeAge/earlier Iron Age field systems were uncovered (Connor 2002).

3.2 Iron Age and Roman

Iron Age remains have been found in the south of the parish (Hall 1996, 102) and close to the subject site during excavations in 1969 (Browne 1977, 81-91).

Excavation at Newmarket Road on the outskirts of Burwell revealed two large pits of Early to Middle Iron Age date, containing a range of artefacts and ecofacts, some of which may have been deliberately placed. Smaller pits and numerous postholes were found scattered across the site. Some contained Iron Age pottery, although many were undated (Bailey 2006).

Closer to the subject site, at Low Road, excavation revealed pits and ditches that were tentatively dated to late Roman although finds also included a number of Middle Iron Age sherds of pottery suggesting earlier activity had also taken place on or near the site (Kenney 1996).

Substantial Roman remains are known to the south of the village (Hall 1996, 107 site 3) and Roman remains have also been found beneath Burwell Castle (Hall 1996, 107 site 4). More recently evidence for Roman occupation has been found beneath new housing development at the junction of Reach Road and Swaffham Road at the south end of the village (AFU site BUR RR01/2).

3.3 Medieval and post-medieval

The development site lies on the western side of North Street, a long, sinuous road which is first mentioned in 1351 and may well have been laid out along a former headland in the open fields. North Street has a large number of late 16th and early 17th century buildings along its frontage, some of which are of high quality and probably associated with the development of water-borne trade along Burwell Lode. Burwell Lode (known as High Lode by 1580 and renamed the old lode in the 1670s) is a sinuous lode that runs to the north of the much straighter modern Burwell Lode (or New Lode). The new lode was cut in the 1650s, most probably by the Bedford Level Commissioners.

Evidence of medieval and post-medieval quarrying (possibly for clunch extraction) has been found in evaluations near St Mary's church (Bailey 2003) and at Burwell Village Community School on The Causeway (Atkins 2005).

More recently an evaluation at Isaacson's Road on the south side of Burwell, has revealed evidence for clunch extraction, wells and iron smithing dating to the medieval period (Muldowney 2006).

A stream rising near Burwell Castle (Spring Close) combines with other minor watercourses to form a larger one further north that has been known as the Weirs since the 1670s but was previously called the Head Lode. The Weirs ran parallel with North Street and fed the New Lode whose junction lies to the north of the subject site. A series of canals and basins were constructed at an unknown date (but probably late 16th/17th century), running eastwards from The Weirs, towards the rear of the properties along the western side of North Street. There were originally at least 23 of these structures (including 18 canals), allowing goods to be taken right up to yards and barns/storage buildings situated in the back plots. While their precise dates of construction and abandonment are unknown, it is clear that those to the south of The Hythe (NGR 558450 267280) had gone out of use by 1841 (RCHME 1972, 43). The Weirs watercourse is thought to have been constructed in the 13th century and served to separate the land from the fen at the fen edge (Walker and Walsh 2006).

More recently an excavation to the south of the development area at Brown's Yard, Burwell revealed evidence of 12th-13th century boundary ditches (Walker and Walsh 2006). Furthermore the evidence uncovered suggest a progressive encroachment from the street frontage to the west. At the street frontages there were two possible timber-framed building defined by narrow slots and postholes which were of a medieval date.

4 Methodology

The objective of this excavation was to preserve archaeological deposits by record within the development area.

Topsoil and subsoil (between 0.80m and 1m thick) was removed from an area of 78m by 18m by a wheeled JCB-type mechanical excavator fitted with a toothless ditching bucket. Machining was carried out under the constant supervision of an experienced archaeologist. Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

All archaeological features and deposits were recorded using CAM ARC's *pro-forma* sheets. Plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

Environmental samples were collected from relevant deposits across the site.

5 Results

Four phases of activity are proposed; the earliest possibly taking place in the prehistoric period included two possible structures. The majority of the remains are likely to be medieval and include evidence that the plot was subdivided by ditches. A water carrying lode ditch formed the southern boundary of the excavation area and a shallow ditch formed its northern boundary. Other features of note include a possible dovecote or hen coop, and a pond or fish tank. Later activity included some quarrying and the lode remained open until the late 19th or early 20th century.

5.1 Phase1 Prehistoric? (fig. 3)

Possible posthole structures

A groups of postholes (153, 155, 157, 159 and 167) located in the northeastern area of the excavation may be the remnants of a three or four cornered post building. Two of the postholes (157 and 159) contained burnt and worked flint flakes suggesting they date to the prehistoric period. One of the postholes (159) also produced a laterally split flake that was unfortunately too fragmentary to allow more than a broad prehistoric date to be assigned (Appendix 3). All of the postholes were extremely shallow (less than 0.13m), and there was evidence that the structure may have been repaired as there were two postholes at two of the corners. Aligned with 153 and 155 was another undated posthole (171) which was 0.20m in diameter and 0.18m deep. The posthole was cut into a small, shallow, linear depression (173), but it is unclear whether the two were associated.

Slightly to the west a further three shallow (0.11m to 0.18m) postholes (**185**, **187** and **189**) may be the remains of a second structure.

A number of other pits may belong to this period, these include a small oval pit (**111**; fig. 6 Section 100) that contained no finds but was certainly earlier than one of the medieval property boundary ditches and would otherwise be isolated. A group of small intercutting pits (**179**, **181** and **183**) were located close to the south of the possible structures and may be associated with one of them, they were otherwise undated. Elsewhere pit **244** contained a decortication flake and a nearby posthole (**246**) may be associated with it.

Phase 2 11th to 12th century? (fig. 3)

Possible barn

Two (6m long) ditches or beamslots (**195/325** and **214/220/361**) were associated with a series of short, shallow slots (**321, 323, 329, 331, 333, 335, 337, 339, 40 and 59, 216, 218, 333, 335, 337, 339**) cut at right-angles to the longer beamslots. All of these features had similar grey silty clay fills and were no deeper than 0.11m. They may together represent the remains of a sub rectangular structure on an approximately north to south alignment. The short slots may have held timbers that supported a raised floor, alternatively they may represent drainage gullies within a barn like structure. A segment (**339**) of this putative structure was truncated by phase 3.1 boundary ditch **162** *etc* suggesting that the building was in place prior to the sub-division of the property.

Pits

Two intercutting pits **309** and **307** were located in the centre of the site in the centre of the possible granary. No artefacts were recovered from these pits which made phasing problematic. An excavated section through these pits revealed that **307** truncated **309**. Pit **307** was suboval with concave sides and a sloping base. It measured 0.60m and 0.30m deep and contained a single fill 306 which consisted of a dark brown silty clay. Pit **309** was oval in shape and measured 0.55m wide and 0.40m deep. It had concave sides and a sloping base and contained a grey silty clay (308) with occasional chalk fragments. Another heavily truncated feature (**241**) possibly a pit was located

adjacent to the lode (**104**) and truncated by ditch 178 etc.

5.2 Phase 3 13th to late 14th Century (fig. 4)

A group of ditches sub-divided the excavation area in the early part of this phase. They defined a narrow property some 11m wide between the Weirs at its western end, and possibly North Street at its eastern end. Further ditches placed at right-angles to the latter sub-divided the property into three unequal sections. At some point during this phase the property was extended or possibly amalgamated with the adjacent property since the ditch dividing them went out of use. The property divisions at right-angles to it continued in use and were re-established on at least two occasions. One structure (tentatively interpreted as a dovecote or hen coop) was erected and this may have caused one of the property divisions to shift slightly to the east. The spur lode along the southern boundary of the excavation may first have been cut in this phase although later re-cuts had destroyed much of the evidence for its initial use. A pond, possibly used as a fish tank, was installed towards the rear of the property and adjacent to the lode, and several ditches appeared to stop at the lode suggesting that it was already in situ.

Phase 3.1

The earliest of a series of property boundaries (197/327/44 and 162/208/201/249/212/289/36) were respectively aligned NNW to SSE and WNW to ESE. Ditch 162 etc was approximately 50m in length and varied between 0.85m and 1.30m in width and between 0.15m and 0.70m in depth. Other than four small sherds (0.018kg) of prehistoric pottery and a flint flake, it was devoid of artefacts. Whilst the artefacts suggest the ditch was open in the prehistoric period its alignment is clearly consistent with other ditches in this group, all of which are all likely to be medieval in date. There is evidence for an earlier phase of the ditch (204) and that it was extended and or remodelled (279/301) at its western end by a much broader (1.80m-2.00m) segment that was similarly irregular in depth (0.27m-0.70m) and followed a slightly different alignment. It apparently terminated approximately 14m from the edge of the excavation and may have been cut as an overflow channel. Finds recovered from it included animal bone and 13th to late 14th century pottery.

Ditch **197/327/44** was 0.40m to 0.52m wide and gradually deepened from 0.07m at its northern end to 0.40m at its southern end where it met (and was possibly truncated by a lode ditch (**104**). It was filled by a mid yellowish grey clay silt and contained only a few fragments of animal bone. It was recut at its southern end (**192**) and was later replaced by a segmented ditch (**165** *etc*), which lay a few metres to its east and was not quite parallel. Where it met the north edge of the site it met ditch **162** *etc* and the two were likely to have been contemporary.

A second much shorter ditch segment (**178/232/55**) lay approximately 11m to the south of and parallel with ditch **162** *etc*. It terminated at and was later than ditch **197** *etc* (above) and was truncated by the lode ditch (**104**) to the west. It was up to 1.80m wide and 0.35m deep and its fills varied from sandy silt to silty chalk. Of particular note were several sherds of 13th to 14th century Ely ware pottery that were recovered from its terminus.

Parallel with ditch **197** etc. and approximately 22m to the east of it was ditch **126/141/143/147/17** a narrow, shallow feature (0.37m to 0.70m wide and 0.09m to 0.16m deep).

Between 15m and 20m to the west of ditch **197** *etc.*, a series of three ditches were cut parallel with it. The two narrower ditches were the earliest with **224/285/76** being cut first and terminating at the south before reaching the lode ditch (**104**), a posthole (**238**) was located immediately to the south of its terminus, a possible continuation of the boundary. This was replaced by ditch **210/258/287/294/48** (0.55m to 1.30m wide and 0.45m to 0.55m deep), which was cut almost adjacent to the west. Ditch **210** *etc* continued south where it was truncated by the lode ditch (**104**).

Phase 3.2

The boundary first marked by ditch **197/327** was re-established slightly to the east by a segmented ditch (**165/175/303/38**) on the same (NNW to SSE) orientation. The ditch segments were between 0.85m and 1m wide and 0.13m to 0.24m deep. Between 15m and 20m to the west of it, a series of three ditches were cut parallel with ditch **165** *etc*. The two earlier ditches (**224** *etc*. and **210** *etc*; phase 3.1) were replaced by ditch **251/281/291/13** (2.06m to 2.39m wide and 0.29m to 0.32m deep) which differed in character from the others both in size and in shape being square in cross-section.

Since all of these ditches truncated the main WNW to ESE ditch (**162** etc) to the north it must be assumed that the boundary was no longer in use and the plot had either been widened or perhaps amalgamated with an adjacent property.

Two possible postholes (139 and 145) were located along the length of ditch 126 *etc*, a third (128) was on the same alignment to the south and a fourth (123) to the north, together they may indicate that a fence line replaced the earlier ditched boundary. The ditch was heavily truncated and it was not possible to determine any relationship with ditch 162 etc. but it appeared to terminate to the south approximately in line with ditches 224/285 and 178/232. The boundary marked by 126 etc was later re-established about 3m to the east (ditch 117/133). It had concave sides with a sloping base, and varied in width (0.30m to 0.66m) and depth (0.20m to 0.58m). The extent of the ditch was partially obscured by the limits of excavation, it was truncated by pit 136.

Spur Lode

All of the NNE to SSW aligned ditches appeared to either stop slightly short of the lode ditch (104/235/80; fig. 8 Section 175 & 180) or did not continue beyond it to the south (Muldowney 2007). The ditch ran along the entire length of the southern edge of the excavation (70m) and was still partially open at its junction with the Weirs. Sections were excavated across it both during evaluation (80) and during excavation (104). It was approximately 4m wide and 2m deep with a U-shaped profile. It had clearly been filled up over a long period of time as at least seven episodes of backfill were observed. The mid and upper fills contained post-medieval and modern materials including old iron bedsteads, the lower fills did not contain any artefacts, but the fact that the much smaller ditch system adjacent to it appeared to respect it would suggest that it was already a feature of the landscape in the 13th century. Similar channels were excavated at Broad Street Ely These were 3.5m to 4m wide and approximately 1.6m deep, they were thought to be able to accommodate a small barge or boat but with no room to turn (Cessford et al 2006, 24).

Possible dovecote or hen coop

A small pennanular ditch (15/19/113/115/118/363) enclosed an area of 6m in diameter and was located in the north-eastern corner of the excavated area. A possible entrance (1.5m wide) was located on its southeastern side. The ditch varied slightly in width (0.61m to 0.86m) and depth (0.10m to 0.41m) its base was generally flat with concave sides. The shallowest sections of the ditch were at its terminals raising the possibility that the entrance may have been a result of truncation. This ditch clearly truncated one of the earlier (NNE to SSW aligned) boundary ditches (126 etc) and contained fragments of 13th to 14th century pottery. It is possible that the boundary was shifted (see 117/133 above) a few metres to the east in order to accommodate the new building.

Pond or fish tank

A large sub rectangular pit (225/229/265; fig. 6 Section 148, fig. 7 Section 149) lay adjacent to the backfilled lode (104/235). The pit had vertical sides and a flat base, it was 7m long, 5m wide and up to 1.40m deep. A one metre wide, shallow (0.25m deep) funnel led into the lode and may have been contemporary with an earlier phase of the lode although was clearly truncated by its latest phase. A monolith sample (sample 121, appendix 9) provided inconclusive evidence for a stable carbonate rich pool in an area of gradually increasing woodland. A fragment of wheat was recovered from a lower fill (sample 113, appendix 8) demonstrating that a lack of cereal pollen in the monolith sample may be due to poor preservation. Pottery of 13th to 14th century date was recovered from the mid fills and a late medieval date for its final infilling is suggested by 15th century pottery from its upper fill. The feature was clearly associated with fairly deep standing water and was from time to time subject to gradual episodes of drainage. Its connection to the adjacent lode ditch suggest that its water level may have been maintained by flowing into the load when the water reached above the level of the funnel. Despite detailed analysis of the sediments the purpose of the pond is unclear, it may have been used to store live fish ready for market, a lack of fish bones need not exclude this interpretation since presumably it would have been necessary to keep the fish alive and healthy for as long as possible. A single posthole (292) adjacent to the pond may have been associated with it. At the Broad Street excavations in Ely a slightly larger but otherwise similar feature was interpreted as a possible fish tank that may later have been used for flax retting (Cessford et al 2006, 10).

Pits

A substantial pit (**120**) was located immediately to the north of the possible dovecote, it is not possible to be certain whether the two were contemporary although it did contain pottery of a similar date (13th to late 14th century). It was sub circular in plan (1.55m diameter and 1.20m deep) and had steep sides with a sloping base. A sub-rectangular vertically sided pit (**136**) was also located close to the

possible dovecote. It was 1.12m wide and 0.64m deep, and contained a fragment of 13th to late 14th century pottery as well as a few fragments of animal bone.

Two square pits (**222** and **296**) were located adjacent to one another at the southern end of ditch **210** etc. They were both similar in size (1.25m by 1.50m) although **296** was far shallower (0.26m) than pit **222** (0.94m). Pit **296** contained three fragments (0.077kg) of 13^{th} to 14^{th} century pottery but pit **222** was undated. The shape and location of the pits suggests they had been dug for a specific but undetermined function.

An isolated sub-circular pit (**298**) also contained two fragments (0.033kg) of 13th to mid 14th century pottery. It was approximately 1m in diameter and 0.30m deep and was otherwise undistinguished.

Pit **311** contained fragments of 13th to 14th century pottery and cut through ditch 224 etc

5.3 Phase 4 15th to 17th century (fig. 5)

Pits

A cluster of pits (242, 254, 259, 271, 275, 313, 316 and 319) lay towards the western end of the excavation area and formed a loose line adjacent to ditch **162** etc (phase 3), although by the time these pits were backfilled ditch 162 etc must have already gone out of use since two pits (259 and 316) were clearly later. The pits varied from circular to sub-rectangular in shape but they were all moderately large (between 1m and 2.4m in length) although none was more than 0.53m deep. Several of them contained pottery dating to the 15th to late 16th century, one pit (254) also included some 19th century pottery, this is likely to have been intrusive since the pit had previously been excavated during evaluation (27) and dated to the 15th to 16th century. In the same general area but slightly isolated were another two pits (269 and 253). Pit 269 truncated the possible fish tank (225 etc) but was otherwise undated. Pit 253 contained 15th to 16th century pottery, it was rectangular in shape with a flat base and vertical sides (1.80m long by 0.46m deep). The function of these pits is difficult to establish, however, the more regular, flat based pits could have been used as fish tanks.

Spur lode

The spur lode (**104** *etc*; fig. 8 Section 175 & 180), first established in phase 3, certainly continued in use throughout phase 4 and into the 19th century since its upper fills contained large iron items such as bedsteads, and it is clearly shown on the 1st edition (1886 and 1901) Ordnance Survey maps.

Quarry pits

A group of pits (**130**, **342**, **344**, **346**, **348**, **351**, **353**, **355**, **358**, **340**; fig. 7 Section 171) in the south-east corner of the development area probably represent quarrying for chalk which was an important industry in medieval and post-medieval Burwell (Franklin 2005). A small amount of late medieval pottery and residual 13th to 14th century pottery was recovered from several of the pits as well as post-medieval iron objects (especially from **342**).

5.4 Unphased and Modern (fig. 2)

A number of features were identified which were difficult to phase due to lack of dating and spatial evidence. These included several shallow irregular pits (131, 150, 169, 206 and 305), and two that may be natural tree throws (21/161, and 283). A short length of apparently curvilinear ditch (148) at the north-eastern corner of the excavation area was also unphased. A modern animal burial (108) was also encountered. It should be noted that spur lode (104 *etc*) continued to be partially open and was still being backfilled into the 19th century.

6 Discussion

Prehistoric

There is limited evidence for prehistoric activity in the form of worked flints, possible posthole structures and pits. Two posthole structures are hinted at; one may have been a rectangular (four post) structure with evidence for repair, the second comprised three postholes forming an arc that may be evidence for a roundhouse. Unfortunately neither the artefacts nor the structures are closely datable and could have occurred any time from the Mesolithic to the Bronze Age.

Medieval 11th to 14th century

There is some evidence to suggest that the site was located within open fields before the 13th century since the only feature before this date was a barn like structure that followed a similar alignment to that set by the later spur lode and boundary ditches. Since the North Street development generally followed the same alignment as the former headlands of common fields the barn would naturally follow a similar alignment. A few fragments of residual pottery suggest an 11th to 12th century date for this activity. Development apparently took place in the 13th to 14th century and, perhaps after initial land enclosure, included the construction of a spur lode leading from the Weirs to bring water and transport closer to the houses fronting onto North Street to the east. The Weirs may be that stretch of water referred to as Wydewereswater in a document of 1353 (Franklin 2005) and the name may indicate that this was a faster flowing stretch of water where eel traps could be placed. The presence of a possible fish pond or tank adjacent to the spur lode is of particular interest and indicates that trade in fish was an important part of the local economy. Also in use at about the same time was a circular building that may be a small dovecote or hencoop. A source of water in the vicinity from which the birds could drink and in which they could bathe was thought essential for a dovecote as pigeons required an abundance of water supply for their moult in the autumn. The presence of a fish tank and dovecote implies relatively high status and suggests that the land was likely to still be under the control of a major landowner such as Ramsey Abbey at this time. Ramsey Abbey was the most likely owner of this land since it was the largest of four landowners in the medieval period and there is documentary evidence that the North Street area was developed on the approval of the Abbey (Franklin2005).

Evidence for shifting and re-establishment of boundaries indicates that these parcels of land remained important over a long period of time. Indeed three of the boundaries (the Weirs to the west, the spur lode to the south and the boundary to the north) have remained in tact to the present day.

The significance of the NNW to SSE ditches is more difficult to interpret. The boundaries were certainly re-established by the cutting of new ditches but their alignment suggests that they may relate to access for more than one property to the spur lode, perhaps to sub-let to properties or people that otherwise did not have waterside frontages. The nearest parallel for a medieval river frontage is the excavation by the Cambridge Archaeological unit at Broad Street in Ely. Here, a number of narrow channels had been cut back from the river in the 14th or 15th century to allow boats to moor for the loading and unloading of goods (Cessford, Alexander and Dickens 2006). Unlike the Burwell example, however, these channels provided direct access to the Ely river frontage.

The model for the development of Burwell suggests that it grew through a series of planned commercial additions (North Street, High Town and Newnham) encouraged by Ramsey Abbey as the main landowner in this area (Walker and Walsh 2006). Beginning in the 13th century, North field (later North Street) was developed with the approval of Ramsey Abbey (Franklin 2005). By the 14th century the network of waterways in Burwell was highly developed. Canals, lodes and basins would have allowed fenland resources to be taken right up to yards and warehouses built alongside in exchange for locally produced goods. The excavations at Kingfisher Drive are evidence of one such property that may have dealt in the movement of livestock such as fish and pigeons.

The development of Newnham (to the south of North Street) is likely to have been later than both North Street and High Town and the earliest

reference to it was in 1440 (Franklin 2005). The common hythe was built here leading into the Weirs and it is possible that its construction caused the smaller (private?) lodes (such as that found at the Kingfisher Drive site) to go into decline.

Late medieval to early post-medieval 15th to 17th century

Although the spur lode clearly continued to be open throughout this period, the character of the adjacent property seems to have changed. There was no longer any evidence that more than one person or property had access to the spur lode and the only features encountered were pits. Those at the western end may be more fish tanks and it is possible that this trade continued into the 15th century, while at the eastern end of the plot a series of irregular pits were dug, possibly to extract chalk, perhaps for ballast or to be made into lime. The apparent reduction in activity noted at the Kingfisher Drive site would seem to support the economic downturn noted in documentary records which suggest that Burwell shrank between the mid fourteenth and mid fifteenth centuries (Franklin 2005). By the late 16th century the Queens Arms Inn had been built at the North Street frontage of this property (built, according to an inscription, in 1587).

7 Conclusions

A number of key elements can be drawn out of the excavations at Kingfisher Drive despite the somewhat limited artefactual evidence. The site is important for the evidence it has provided concerning the date and management of waterways in Burwell during the medieval period. The excavation supports the documentary evidence that suggests a growth around North Street beginning in the 13th century and there is clear evidence that the North Street area was developed over and influenced by an earlier agricultural landscape.

The presence of three key features (a lode, possible dovecote and fish tank) implies that the property was under the influence or control of a wealthy landowner and there is evidence that access to the lode may have been sub-let to more than one person or property that did not otherwise have access to a water frontage.

A decline in the property from the late 14th century may have been influenced by a general decline in the fortunes of the town during this period. The property never seems to have recovered subsequently, possibly due to the construction of a common hythe in the new development of Newnham to the south.

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The brief for archaeological works was written by Kasia Gdaniec who visited the site and monitored the excavation.

Bibliography

British Geological Survey	1981	Solid and Drift Geology, Sheet 188
Bailey,G.D	2006	Iron Age Ritual Pits at Newmarket Road, Burwell Cambridgeshire: An Archaeological Excavation CCC AFU Report Number 850
Brown,D.M	1977	Excavations at Burwell, Cambridgeshire PCAS LXVI P81-91
Cessford, C., Alexander, M., and Dickens, A.	2006	Between broad Street and the Great ouse: waterfront archaeology in Ely. EAA Report 114
Connor, A	2006	Specification for Archaeological Evaluation at 15 and 42 Kingfisher Drive, Burwell
Franklin, W, Gdaniec, K	2005 2006	Burwell : The History of a Fen-Edge Village Brief for Archaeological Evaluation at 15 and 42 Kingfisher Drive, Burwell
RCHME	1972	An Inventory of Historical Monuments in the County of Cambridge Vol.2 North-East Cambridgeshire. Worcester and London
Kenney, S	1996	Roman and Later Trackways and Boundaries at 95/97 Low Road Burwell ;An Archaeological Excavation AFU REP No A88
Muldowney, M	2007	Medieval Remains on Land Adjacent to Nos.15 and 42 Kingfisher Drive, Burwell Cambridgeshire :An Archaeological Evaluation
Walker, C and Walsh, A	2006	Medieval Activity at Brown's Yard, North Street, Burwell, Cambridgeshire NA report 06/117
Wareham, A.F. and Wright, A.P.M.	2002	A History of the County of Cambridge and The Isle of Ely Vol.X. Oxford university Press

Context	Cut	Category	Phase	Feature Type	Fine component	Width m	Depth m
100	104	fill	4.0	ditch	Light brown chalky silt	3.10	0.30
101	104	fill	4.0	ditch	Light brown chalky silt Fill of 104	1.60	0.60
102	104	fill	4.0	ditch	Dark brown silty clay Fill of 104	2.12	0.20m
103	0				Not used		
104	104	cut	4.0	ditch	Filled by 100,101,102,103, 106 107	4.00	2.00
105	104	fill	4.0	ditch	Dark grey silty clay Fill of 104	3.02	0.80
106	104	fill	4.0	ditch	Dark grey brown silty clay Fill of 104	3.02	0.80
107	104	fill	4.0	ditch	Light grey silty clay Fill of 104	1.50	0.20
108	108	cut	0.0	pit	Filled by 109	0.92	0.12
109	108	fill	0.0	pit	Mid grey silty clay Fill of 108	0.92	0.12
110	111	fill	1.0	pit	Mid grey silty clay Fill of 111	0.30	0.03
111	111	cut	1.0	pit	Filled by 110	0.30	0.03
112	113	fill	3.2	ditch	Mid grey brown silty clay Fill of 113	0.60	0.10
113	113	cut	3.2	ditch	Filled by 112	0.66	0.10
114	115	fill	3.2	ditch	Mid grey brown silty clay Fill of 115	0.61	0.14
115	115	cut	3.2	ditch	Filled by 114	1.20	0.20
116	117	fill	3.2	ditch	Mid slightly orange grey silty clay	0.30	0.20
117	117	cut	3.2	ditch	Filled by116	0.30	0.20
118	118	cut	3.2	ditch	Filled by 119 Dovecote	0.86	0.20
119	118	fill	3.2	ditch	Pale mid brown silty clay	0.86	0.20
120	120	cut	3.2	pit	Filled by 121 and 122	1.55	1.20
121	120	fill	3.2	pit	Pale grey brown yellow silty clay	1.55	0.60
122	120	fill	3.2	pit	Pale grey brown yellow silty clay	1.55	0.60
123	123	cut	3.2	post hole	Filled by 124	0.31	0.12
124	123	fill	3.2	post hole	Pale grev brown silty clay	0.31	0.12
125	126	fill	3.1	ditch	Pale brownish grey sandy silt	0.70	0.07
126	126	cut	3.1	ditch	Filled by 125	0.70	0.20
127	128	fill	3.2	post hole	Mid grevish brown sandy silt	0.50	0.70
128	128	cut	3.2	pit	Filled by 127	0.50	0.70
129	130	fill	4.0	pit	Pale grey sandy silt	0.50	0.20
130	130	cut	4.0	pit	Filled by 129	0.50	0.20
131	131	cut	0.0	pit	Filled by 132	0.55	0.07
132	131	fill	0.0	pit	Pale grev brownsandy silt	0.55	0.07
133	133	cut	3.2	ditch	Filled by 134 and 135	0.66	0.58
134	133	fill	3.2	ditch	Mid grev silty clay	0.52	0.28
135	133	fill	32	ditch	Mid grev silty clay	0.66	0.56
136	136	cut	3.2	pit	Filled by 137	1.12	0.64
137	136	fill	3.2	pit	l ight grev clav silt	1 12	0.64
138	139	fill	3.2	post hole	Mid grev clavev silt	0.16	0.10
139	139	cut	32	post hole	Filled by	0.16	0.10
140	141	fill	3.1	ditch	Mid grev clav silt	0.37	0.16
141	141	cut	3.1	ditch	Filled by 140	0.37	0.16
142	143	fill	3.1	ditch	Mid grev clavish silt	0.63	0.09
143	143	cut	3.1	ditch	Filled by 142	0.63	0.09
144	145	fill	3.2	nost hole	Mid clavev silt	0.00	0.06
145	145	cut	3.2	post hole	Filled by 144	0.12	0.06
146	147	fill	3.1	ditch	Mid grev clavev silt	0.12	0.00
140	147	cut	3.1	ditch	Filled by 146	0.00	0.11
148	148	cut	0.0	ditch	Filled by 149	0.00	0.11
140	148	fill	0.0	ditch	Pale grey brown silty clay	0.75	0.37
150	150	cut	0.0	Pit	Filled by 151	0.75	0.30
150	150	fill	0.0	Pit	Pale grey brown silty clay	0.15	0.30
152	153	fill	1.0	nost hole	Mid brownish arev sandy silt	0.15	0.30
152	152	cut	1.0	nost hole	Filled by 152	0.25	0.00
153	155	fill	1.0	nost hole	Mid brownish grev sandy silv	0.20	0.00
104	100	111	1.0	postitule	ining prowition grey sating sity	0.32	0.08

Appendix 1: Context Summary

Context	Cut	Category	Phase	Feature Type	Fine component	Width m	Depth m
155	155	cut	1.0	post hole	Filled by 154	0.32	0.08
156	157	fill	1.0	cremation	Mid greyish brown sandy silt	0.25	0.09
157	157	cut	1.0	post hole	Filled by 156	0.25	0.09
158	159	fill	1.0	pit	Mid greyish brown sandy silt	0.75	0.12
159	159	cut	1.0	pit	Filled by 158	0.75	0.12
160	161	fill	0.0	pit	Mid brownish grey sandy silt	0.90	0.50
161	161	cut	0.0	pit	Filled by 160	0.90	0.50
162	162	cut	3.1	ditch	Filled by 163	0.40	0.17
163	162	fill	3.1	ditch	Pale brown grey yellowish green silty clay	0.40	0.17
164	164	cut	3.2	ditch	Pale browney grey silty clay	0.85	0.13
165	164	fill	3.2	ditch	Filled by 165	0.85	0.13
166	167	cut	1.0	pit	Mid greyish brown sandy silt	0.35	0.13
167	167	cut	1.0	pit	Filled by 166	0.35	0.13
168	169	fill	0.0	pit	Mid greyish brown sandy silt	0.70	0.12
169	169	cut	0.0	pit	Filled by 168	0.70	0.12
170	171	fill	1.0	post hole	Mid grey clayey silt	0.20	0.18
171	171	cut	1.0	post hole	Filled by 170	0.20	0.18
172	173	fill	1.0	pit	Light grey clay silt	0.30	0.12
173	173	cut	1.0	pit	Filled by 172	0.30	0.12
174	175	fill	3.2	ditch	Pale brownish grey sandy silt	1.0	0.24
175	175	cut	3.2	ditch	Filled by 174	1.0	0.24
176	178	fill	3.1	ditch	Mid brown silty sand	1.50	0.30
177	178	fill	3.1	ditch	Pale orange grey silty sand	1.50	0.30
178	178	cut	3.1	ditch	Filled by 176 and 177	1.50	0.32
179	179	cut	1.0	pit	Filled by 180	0.64	0.38
180	179	till ,	1.0	pit	Mid grey clay silt	0.64	0.38
181	181	cut	1.0	pit	Filled by 182	1.04	0.20
182	181	till ,	1.0	pit	Light yellowish grey clay silt	1.04	0.20
183	183	cut	1.0	pit	Filled by 184	1.10	0.26
184	183	till ,	1.0	pit	Mid brownish grey clay silt	1.10	0.26
185	185	cut	1.0	post hole	Filled by 186	0.20	0.16
186	185	TIII t	1.0	post hole	Mid grey clay slit	0.20	0.16
187	187	CUT	1.0	post noie	Filled by 188	0.19	0.18
188	187	TIII out	1.0	post hole	Filled by 100	0.19	0.18
109	109	CUL FII	1.0		Filled by 190	0.21	0.11
190	109	iiii fiil	1.0	ditab	Mid brownich grov clovich silt	0.21	0.11
191	192	IIII out	3.1 2.1	ditab		0.03	0.00
192	192	fill	3.1	ditab	Filled by 191 Mid browniah grov cloviah silt	0.00	0.00
193	195	fill	2.0	ditch	Pale Vellowish grov clavish silt	0.20	0.10
104	105	cut	2.0	ditch	Filled by 193 and 194	0.25	0.25
195	195	fill	2.0	ditch	Mid vellowish grev clavish silt	0.23	0.25
107	107	cut	3.1	ditch	Filled by 196	0.40	0.15
198	201	fill	3.1	ditch	Pale Brownish grey clavish silt	0.40	0.10
199	201	fill	3.1	ditch	Mid Brownish grey clavish silt	0.60	0.50
200	201	fill	3.1	ditch	Mottled mid whitish arey clay silt	0.50	0.06
201	201	cut	3.1	ditch	Filled by 198 199 and 200	1 20	0.60
202	204	fill	3.1	ditch	Dark grevish brown sandy silt	0.80	0.85
203	204	fill	3.1	ditch	Pale vellowish grev clavish silt	0.85	0.10
204	204	cut	3.1	ditch	Filled by 203 and 202	0.85	0.90
205	206	fill	0.0	pit	Dark grey silty clay	0.60	0.30
206	206	cut	0.0	pit	Filled by 205	0.60	0.30
207	208	fill	3.1	ditch	Light grey silty clay	0.52	0.31
208	208	cut	3.1	ditch	Filled by 207	0.52	0.31
209	210	fill	3.1	ditch	Pale brownish grey clayish silt	1.30	0.50
210	210	cut	3.1	ditch	Filled by 209	1.30	0.50
211	212	fill	3.1	ditch	Light grey silty clay	1.21	0.56
212	212	cut	3.1	ditch	Filled by 211	1.21	0.56
213	214	fill	2.0	beamslot	Mid orangey grey silty clay	0.80	0.12

Context	Cut	Category	Phase	Feature Type	Fine component	Width m	Depth m
214	214	cut	2.0	beamslot	Filled by 213	0.80	0.12
215	216	fill	2.0	beamslot	Filled by 213, 217 and 219	0.20	0.04
216	216	cut	2.0	beamslot	Filled by 214, 218 and 220	0.20	0.04
217	218	fill	2.0	beamslot	Mid orangey grey silty clay	0.50	0.07
218	218	cut	2.0	beamslot	Filled by 217	0.50	0.07
219	220	fill	2.0	beamslot	Mid orangey grey silty clay	0.40	0.05
220	220	cut	2.0	beamslot	Filled by 219	0.40	0.05
221	222	fill	3.2	pit	Light brownish grey silty clay	1.52	0.94
222	222	cut	3.2	pit	Filled by 222	1.52	0.94
223	224	TIII out	3.1	ditch	Filled by 222	0.50	0.12
224	224	cut	3.1 3.2	nit	Filled by 225	0.50	0.12
225	225	fill	3.2	pit	Mid arey clay silty clay	1.40	0.32
220	225	fill	3.2	pit	Mid grey with mottled orange clay silt	1.13	0.02
228	225	fill	3.2	pit	Mid grey clay silt	1.46	0.48
229	229	cut	3.2	pit	Filled by 233 and 234	1.96	1.10
230	232	fill	3.1	ditch	Mid brown silty clay	1.80	0.30
231	232	fill	3.1	ditch	Light brown grey silty chalk	1.80	0.30
232	232	cut	3.1	ditch	Filled by 230 and 231	1.80	0.35
233	229	fill	3.2	pit	Mid grey clay	1.46	0.42
234	229	fill	3.2	pit	Mid grey with orange clay silt	1.96	0.68
235	235	cut	4.0	ditch	Filled by 236	0.68	0.56
236	235	fill	4.0	ditch	Dark greyish brown clay silt	0.68	0.56
237	238	fill	3.1	post hole	Light grey silty chalk	0.30	0.06
238	238	cut	3.1	post hole	Filled by 237	0.30	0.06
239	241	fill	2.0	ditch	Mid grey brown silty clay	0.45	0.12
240	241	fill	2.0	ditch	Mid grey silty clay	0.26	0.26
241	241	cut	2.0	ditch	Filled by 239 and 240	0.45	0.39
242	242	cut	4.0	pit	Filled by 243	1.36	0.45
243	242	fill	4.0	pit	Pale browney grey silty clay	1.36	
244	244	cut	1.0	pit	Filled by245	0.55	0.12
245	244	fill	1.0	pit	Pale browney grey silty clay	0.55	0.12
246	246	cut	1.0	post hole	Filled by 247	0.37	0.06
247	246	fill	1.0	post hole	Pale brow grey chalky silty clay	0.37	0.06
248	249	fill	3.1	ditch	Light greyish brown silty clay	1.30	0.70
249	249	cut	3.1	ditch	Filled by 248	1.30	0.70
250	251	fill	3.2	ditch	Light greyish brown silty clay	1.80	0.15
251	251	CUI	3.2	alten	Dark grey slity clay	1.80	0.15
252	253	nii out	4.0	pit	Filled by 252	1.80	0.40
200	200	cut	4.0	pit	Filled by 252	1.00	0.40
254	254	fill	4.0	pit	Pale brown grey silty clay	1.40	0.43
255	254	fill	4.0	pit	Modern backfill (excavated during evaluation)	1.40	0.43
257	258	fill	3.1	ditch	l joht grev silty clay	1 13	0.57
258	258	cut	3.1	ditch	Filled by 257	1.13	0.57
259	259	cut	4 0	pit	Filled by 260 261 and 262	1 15	0.90
260	259	fill	4.0	pit	Mid grev silty clay	1.15	0.50
261	259	fill	4.0	pit	Pale grev silty clay	1.10	0.22
262	259	fill	4.0	pit	Pale grey silty clay	1.10	0.18
263	264	fill	0.0	pit	Not recorded		
264	264	cut	0.0	pit	Not recorded		
265	265	cut	3.2	pit	Filled by 266,267 and 268	1.78	1.30
266	265	fill	3.2	pit	Mid grey clay	1.78	0.20
267	265	fill	3.2	pit	Mid grey with orange mottling clay silt	1.76	0.84
268	265	fill	3.2	pit	Mid grey clay silt	1.70	0.44
269	269	cut	4.0	pit	Filled by 270	0.78	0.43
270	269	fill	4.0	pit	Light yellowish grey	0.78	0.43
271	271	cut	4.0	pit	Filled by 272 and 273	1.57	0.79
272	271	fill	4.0	pit	Mid grey mottled silty clay	1.57	0.40

272 271 1160 0.035 274 275 275 017 017 018 <t< th=""><th>Context</th><th>Cut</th><th>Category</th><th>Phase</th><th>Feature Type</th><th>Fine component</th><th>Width m</th><th>Depth m</th></t<>	Context	Cut	Category	Phase	Feature Type	Fine component	Width m	Depth m
274 275 273 274 274 274 274 274 274 274 274 274 1.42 0.44 0.42 0.44 0.22 0.64 0.77 275 2.00 0.44 278 274 1.16 dich Hild to light grey sithy clay 2.06 0.22 281 281 0.10 pit Filled by 282 1.30 0.60 0.22 282 283 1.31 dich Hild by 284 1.24 0.14 286 285 1.31 dich Hild by 288 0.30 0.10 287 287 1.31 dich Hild by 288 0.35 0.22 0.22 0.22 0.23 0.22 0.22 0.23 0.22 </td <td>273</td> <td>271</td> <td>fill</td> <td>4.0</td> <td>pit</td> <td>Pale grey with some mottling silty clay</td> <td>1.60</td> <td>0.35</td>	273	271	fill	4.0	pit	Pale grey with some mottling silty clay	1.60	0.35
275 275 275 275 275 40 pit Grey silty clay 1.42 0.14 276 275 1.1 ditch Light mid grey silty clay 0.55 0.33 278 275 1.1 ditch Hiled by 277 aut and 278 2.00 0.70 278 275 ditch Hiled by 274 aut and 278 2.00 0.72 281 281 0.1 3.2 ditch Hiled by 278 0.00 0.02 282 283 0.0 pit Light grey silty chaik 1.30 0.60 283 283 0.0 pit Filled by 282 1.30 0.60 284 285 285 1.1 ditch Filled by 284 0.26 0.30 0.10 285 285 1.3 ditch Filled by 284 0.26 0.32 0.25 286 287 1.3 ditch Filled by 284 0.32 0.25 0.32 0.32 <td< td=""><td>274</td><td>275</td><td>fill</td><td>4.0</td><td>pit</td><td>Pale grey silty clay</td><td>1.42</td><td>0.20</td></td<>	274	275	fill	4.0	pit	Pale grey silty clay	1.42	0.20
276 275 271 279 279 279 279 279 279 200 0.40 278 279 11 dich Juhr mid grey silty clay 2.00 0.40 278 279 11 dich Hild rey brown dravey silt 2.00 0.70 281 281 10.1 3.2 dich Mid grey brown dravey silt 2.06 0.22 281 283 10.1 0.0 pt Light grey silty chalk 1.1.30 0.60 282 283 11.1 dich Filled by 282 1.30 0.60 284 285 1.3 dich Light grey silty chalk 0.30 0.10 286 287 1.3 dich Light grey silty chalk 0.30 0.10 288 289 1.1 dich Light grey silty chalk 0.30 0.10 288 289 1.3 dich Light grey silty chalk 0.32 0.22 289 280	275	275	cut	4.0	pit	Filled by 274 and 276	2.44	0.28
277 279[iii] 3.1 ditch Light mid grey silly clay 0.05 278 279[iii] 3.1 ditch Filled by 277 and 278 2.00 0.70 280 281[iii] 3.2 ditch Filled by 200 2.06 0.22 281 281[cti] 3.2 ditch Filled by 280 2.06 0.22 282 283[iii] 0.0 pit Light grey sitly chalk 1.30 0.60 284 285[cu1] 3.1 ditch Filled by 284 1.24 0.14 285 285[cu1] 3.1 ditch Filled by 284 0.30 0.10 287 287[cu1] 3.1 ditch Filled by 284 0.33 0.26 288 289[pii] 3.1 ditch Filled by 284 0.33 0.25 289 289[pii] 3.2 ditch Filled by 280 0.23 0.22 280 291[pii] 3.2 ditch Filled by 290 0.23 0.22	276	275	fill	4.0	pit	Grey silty clay	1.42	0.14
278 279 260 0.22 281 283 283 10 0.0 pit 1194 0.0	277	279	fill	3.1	ditch	Light mid grey silty clay	0.55	0.33
279 279 279 278 2.00 0.70 280 281 101 3.2 ditch Mid grey brown clayey silt 2.06 0.22 281 281 281 2.01 0.0 pit Light grey silty chalk 1.30 0.66 282 283 283 283 283 1.31 ditch Mid grey brown clayey silty chalk 1.24 0.14 285 285 211 3.1 ditch Filled by 284 1.24 0.14 286 289 1.1 ditch Filled by 288 0.30 0.10 287 287 2.11 ditch Filled by 288 0.33 0.25 0.33 289 289 211 3.2 ditch Filled by 283 0.23 0.22 0.23 0.32 0.22 2.23 0.32 0.22 2.24 0.24 0.24 0.25 0.35 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 </td <td>278</td> <td>279</td> <td>fill</td> <td>3.1</td> <td>ditch</td> <td>Mid to light grey silty clay</td> <td>2.00</td> <td>0.40</td>	278	279	fill	3.1	ditch	Mid to light grey silty clay	2.00	0.40
280 281 [ar] 12. ditch Mid grey brown clayey silt 2.06 0.22 281 281 [cut] 3.2 ditch Filled by 280 2.06 0.22 282 283 [fill 0.0 pit Light grey silty chalk 1.30 0.60 284 285 [fill 3.1 ditch Filled by 284 1.24 0.14 285 285 [cut] 3.1 ditch Filled by 284 0.23 0.01 287 287 [cut] 3.1 ditch Filled by 288 0.30 0.10 288 289 [cut] 3.1 ditch Light grey silty clay 0.25 0.35 290 [291] 0.13 ditch Hiled by 283 0.33 0.23 0.28 291 [291] 3.2 post hole Filled by 293 0.23 0.26 0.25 0.45 296 294 [244] 3.1 ditch Mid grey clay silt 0.60 0.26 292 292 [fill 3.2 pit Filled by 297	279	279	cut	3.1	ditch	Filled by 277 and 278	2.00	0.70
281 281 282 283 0.0 <td>280</td> <td>281</td> <td>fill</td> <td>3.2</td> <td>ditch</td> <td>Mid grey brown clayey silt</td> <td>2.06</td> <td>0.22</td>	280	281	fill	3.2	ditch	Mid grey brown clayey silt	2.06	0.22
222 233, fill 0.0 pit Light grey silty chalk 1.30 0.60 283 283, 233, or 0 pit Filled by 282 1.30 0.60 284 285, fill 3.1 ditch Filled by 284 1.24 0.14 286 287, fill 3.1 ditch Filled by 288 0.30 0.10 287 287, out 3.1 ditch Filled by 288 0.35 0.25 289 289, fill 3.1 ditch Hild grey brown silly clay 2.39 0.32 281 291, full 3.2 ditch Mid grey brown silly clay 2.39 0.32 282 282, cut 3.2 post hole Filled by 283 0.23 0.26 284 284, cut 3.1 ditch Mid orangish grey clay silt 0.35 0.45 285 294 fill 3.1 ditch Mid orangish grey clay silt 0.60 0.26 287 286, fill 3.1 pit Filled by 299<	281	281	cut	3.2	ditch	Filled by 280	2.06	0.22
283 283,cut 0.0 pit Filled by 282 1.30 0.60 284 285,fill 3.1 ditch Nid brown grey silly chalk 1.24 0.14 285 285,full 3.1 ditch Light grey silly chalk 0.30 0.10 287 287,full 3.1 ditch Light grey silly clay 0.25 0.35 288 289,full 3.1 ditch Filled by 288 0.33 0.25 280 291,full 3.2 ditch Filled by 280 2.39 0.32 281 291,full 3.2 post hole Filled by 293 0.23 0.28 282 292,full 3.2 post hole Mid grey clay silt 0.55 0.45 286 294,full 3.1 ditch Filled by 297 0.60 0.26 286 296,full 3.2 pit Filled by 299 0.45 0.30 286 296,full 3.1 pit Filled by 299 0.65	282	283	fill	0.0	pit	Light grey silty chalk	1.30	0.60
284 285 11 ditch Mid brown grey silly chalk 1.24 0.14 285 285-ut 3.1 ditch Filled by 284 0.30 0.10 287 287-cut 3.1 ditch Filled by 288 0.33 0.10 288 289-pill 3.1 ditch Filled by 288 0.35 0.25 289 289-pill 3.1 ditch Filled by 289 0.32 0.32 291 291 cut 3.2 ditch Mid grey brown silty clay 2.39 0.32 292 292 cut 3.2 post hole Filled by 293 0.23 0.28 294 294-cut 3.1 ditch Mid orangish grey clay silt 0.25 0.45 296 296-cut 3.2 pit Filled by 297 0.60 0.26 297 296-fill 3.2 pit Filled by 297 0.60 0.26 298 296-fill 3.1 pit Filled by 202 0.95 0.30<	283	283	cut	0.0	pit	Filled by 282	1.30	0.60
285 285,cut 3.1 ditch Filled by 284 1.24 0.14 286 287,full 3.1 ditch Light grey silly chalk 0.30 0.10 287 287,cut 3.1 ditch Light grey silly chalk 0.35 0.35 0.25 0.35 289 289,cut 3.1 ditch Hild grey brown silty clay 2.38 0.32 281 291,cut 3.2 ditch Filled by 293 0.23 0.23 282 292,cut 3.2 post hole Filled by 293 0.23 0.26 283 292,fill 3.2 post hole Mid grey clay silt 0.55 0.45 284 284,cut 3.1 ditch Filled by 297 0.60 0.26 286 296,cut 3.1 pit Filled by 299 0.95 0.33 286 286,fill 3.1 pit Pilled by 299 0.95 0.33 287 298,fill 3.1 pit Filled	284	285	fill	3.1	ditch	Mid brown grey silty chalk	1.24	0.14
286 287 fili 3.1 ditch Light grey silty chalk 0.30 0.10 287 287 cut 3.1 ditch Light grey silty clay 0.25 0.35 288 286 cut 3.1 ditch Filled by 288 0.36 0.25 290 291 full 3.2 ditch Filled by 290 2.39 0.32 291 291 cut 3.2 ditch Filled by 293 0.23 0.22 0.23 0.22 0.2	285	285	cut	3.1	ditch	Filled by 284	1.24	0.14
287 287 cut 3.1 ditch Filled by288 0.30 0.30 288 289 cut 3.1 ditch Filled by 288 0.35 0.25 290 291 291 cut 3.2 ditch Mid grey brown silty clay 2.39 0.32 292 292 cut 3.2 post hole Filled by 293 0.23 0.26 293 292 cut 3.2 post hole Filled by 295 0.55 0.45 294 294 cut 3.1 ditch Mid grey clay silt 0.23 0.26 295 294 fill 3.1 ditch Mid orangish grey clay silt 0.60 0.26 296 296 cut 3.1 pit Filled by 295 0.35 0.30 298 298 cut 3.1 pit Filled by 297 0.60 0.26 297 296 fill 3.1 pit Filled by 304 0.60 0.27 303 300 fill 3.1 pit Filled by 302	286	287	fill	3.1	ditch	Light grey silty chalk	0.30	0.10
288 289 239 0.32 239 0.32 239 0.32 239 0.23 0.23 0.23 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.22 0.23 0.26 289 280 cut 3.1 ditch Filled by 295 0.55 0.45 289 286 1.1 ditch Filled by 297 0.60 0.26 0.30 289 286 1.3.1 pit Filled by 299 0.95 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30 0.30	287	287	cut	3.1	ditch	Filled by288	0.30	0.10
288 286 0.35 0.35 0.35 299 291 cut 3.2 ditch Filled by 290 2.39 0.32 291 291 cut 3.2 post hole Filled by 293 0.23 0.26 293 292 cut 3.1 ditch Filled by 295 0.55 0.45 294 294 cut 3.1 ditch Filled by 297 0.60 0.26 295 296 fill 3.2 pit Filled by 297 0.60 0.26 297 296 fill 3.2 pit Mid orangish grey clay silt 0.60 0.26 297 296 fill 3.2 pit Mid orangish grey clay silt 0.60 0.26 298 298 fill 3.1 pit Light prown silty clay 0.95 0.33 300 301 fill 3.1 pit Light proy chalky silt 0.96 0.18 303 dos cut	288	289	fill	3.1	ditch	Light grey silty clay	0.25	0.35
290 291 fill 3.2 ditch Filled by 290 2.39 0.32 291 291 cut 3.2 post hole Filled by 293 0.23 0.26 293 292 cut 3.2 post hole Filled by 295 0.55 0.45 294 294 cut 3.1 ditch Filled by 295 0.55 0.45 295 294 fill 3.1 ditch Mid orangish grey clay silt 0.56 0.45 296 294 fill 3.1 ditch Mid orangish grey clay silt 0.60 0.26 297 296 fill 3.2 pit Filled by 297 0.60 0.26 298 298 cut 3.1 pit Filled by 290 0.95 0.30 299 298 fill 3.1 pit Light brown silty clay 0.95 0.30 303 301 dot1 cut 3.1 pit Light brown silty clay 0.95 0.30 303 303 cut 3.2 ditch Light by 300 1.80 <td>289</td> <td>289</td> <td>cut</td> <td>3.1</td> <td>ditch</td> <td>Filled by 288</td> <td>0.35</td> <td>0.25</td>	289	289	cut	3.1	ditch	Filled by 288	0.35	0.25
291 291 292 212 232 023 0.23 0.23 292 292 291 3.2 post hole Filled by 293 0.23 0.26 293 292 111 3.1 ditch Filled by 295 0.55 0.45 295 294 111 3.1 ditch Mid orangish grey clay silt 0.55 0.45 295 294 11 3.2 pit Filled by 297 0.60 0.26 297 296 3.1 pit Filled by 299 0.95 0.30 298 298 298 111 3.1 pit Pilled by 300 1.80 0.27 301 301 otic 1.1 pit Filled by 302 0.96 0.18 303 303 2.2 ditch Filled by 302 0.96 0.18 303 303 3.2 ditch Filled by 304 0.70 0.21 306 307 10.0 pit Light grey silty clay 0.50 0.20 306 307	290	291	fill	3.2	ditch	Mid grey brown silty clay	2.39	0.32
292 292 3.2 post hole Hild gy 293 0.23 0.26 293 294 21 3.1 ditch Filled by 295 0.55 0.45 294 294 204 3.1 ditch Filled by 297 0.60 0.26 295 296 3.2 pit Filled by 297 0.60 0.26 297 296 3.2 pit Hild orangish grey clay silt 0.60 0.26 298 298 201 3.1 pit Plate grey brown silty clay 0.95 0.30 300 301 fill 3.1 pit Light prown silty clay 1.80 0.27 301 301 cut 3.1 pit Light grey chalky silt 0.96 0.18 303 303 204 ditch Filled by 302 0.96 0.18 304 305 pit Filled by 304 0.70 0.21 305 305 pit Filled by 304 0.70 0.21	291	291	cut	3.2	ditch	Filled by 290	2.39	0.32
293 292 294 0.21 0.25 0.25 0.45 294 294 1.1 ditch Filled by 295 0.55 0.45 296 296 204 3.2 pit Filled by 297 0.60 0.26 297 296 6ili 3.2 pit Filled by 297 0.60 0.26 297 296 6ili 3.1 pit Filled by 299 0.95 0.30 298 298 fill 3.1 pit Filled by 290 0.95 0.30 300 301 full 3.1 pit Filled by 300 1.80 0.27 302 303 fill 3.2 ditch Light grey silty clay 0.96 0.18 303 303 cut 3.2 ditch Filled by 304 0.70 0.21 306 307 fill 2.0 pit Filled by 304 0.70 0.21 306 307 fill <td< td=""><td>292</td><td>292</td><td>cut</td><td>3.2</td><td>post hole</td><td>Filled by 293</td><td>0.23</td><td>0.26</td></td<>	292	292	cut	3.2	post hole	Filled by 293	0.23	0.26
294 294 294 0.15 0.45 295 294 fill 3.1 ditch Mid orangish grey clay silt 0.60 297 296 fill 3.2 pit Filled by 297 0.60 0.26 297 296 fill 3.1 pit Filled by 299 0.95 0.30 298 298 fill 3.1 pit Pale grey brown silty clay 0.95 0.30 300 301 fill 3.1 pit Filled by 300 1.80 0.27 301 301 cut 3.1 pit Filled by 300 1.80 0.27 303 303 cut 3.2 ditch Light grey chalky silt 0.96 0.18 303 303 cut 3.2 ditch Filled by 304 0.70 0.21 305 305 cut 0.0 pit Filled by 306 and 359 0.60 0.30 308 309 fill 2.0 pit Filled by 306 and 359 0.60 0.30 303 307 cut	293	292	fill	3.2	post hole	Mid grey clay silt	0.23	0.26
298 294 Jui 3.1 ditch Mid orangish grey clay silt 0.55 0.45 296 296 Juit Jit Filled by 297 0.60 0.26 297 296 Jil Jit Filled by 297 0.60 0.26 298 298 Jil pit Filled by 299 0.95 0.30 300 301 Jil pit Light brown silty clay 0.95 0.30 301 Jil pit Light prey silty clay 1.80 0.27 301 Jil Jit Light grey chalky silt 0.96 0.18 303 Jos fill 0.0 pit Light grey silty clay 0.50 0.20 305 Jos fill 0.0 pit Filled by 304 0.70 0.21 306 307 Jor pit Filled by 308 0.55 0.40 309 Jor pit Filled by 308 0.55 0.40 309 Jor pit Filled by 312 0.7	294	294	cut	3.1	ditch	Filled by 295	0.55	0.45
296 296 297 206 0.10 0.20 297 296 3.1 pit Mid orangish grey clay silt 0.60 0.26 298 298 3.1 pit Filled by 299 0.95 0.30 300 301 fill 3.1 pit Light brown silty clay 0.95 0.30 301 301 cut 3.1 pit Filled by 300 1.80 0.27 302 303 fill 3.2 ditch Light grey chalky silt 0.96 0.18 303 303 cut 3.2 ditch Filled by 302 0.96 0.18 304 305 fill 0.0 pit Eiled by 304 0.70 0.21 305 307 fill 2.0 pit Gark brown silty clay 0.45 0.40 308 309 fill 2.0 pit Garey silty clay 0.45 0.40 309 309 cut 2.0 pit Filled by 306 0.55 0.40 310	295	294	fill	3.1	ditch	Mid orangish grey clay silt	0.55	0.45
29/ 296 ptil 3.2 pit Mid orangish grey clay sitt 0.60 0.26 298 298 cut 3.1 pit Filled by 299 0.95 0.30 300 301 fill 3.1 pit Light brown silty clay 0.95 0.30 301 301 cut 3.1 pit Filled by 300 1.80 0.27 302 303 fill 3.2 ditch Light grey chalky silt 0.96 0.18 303 303 cut 3.2 ditch Filled by 302 0.96 0.18 304 305 fill 0.0 pit Light grey silty chalk 0.70 0.21 305 305 cut 0.0 pit Filled by 304 0.70 0.21 306 307 fill 2.0 pit Filled by 308 0.55 0.40 309 309 cut 2.0 pit Filled by 308 0.55 0.40 309 309 cut 2.0 pit Filled by 309 0.90 0.18	296	296	cut	3.2	pit	Filled by 297	0.60	0.26
298 298 Cut 3.1 pit Pale grey brown silty clay 0.95 0.30 300 301 fill 3.1 pit Light brown silty clay 1.80 0.27 301 301 cut 3.1 pit Light brown silty clay 1.80 0.27 302 303 fill 3.2 ditch Light grey shalky silt 0.96 0.18 303 303 cut 3.2 ditch Filled by 302 0.96 0.18 303 305 cut 0.0 pit Light grey silty chalk 0.70 0.21 305 305 0.0 pit Filled by 304 0.70 0.21 306 307/fill 2.0 pit Filled by 306 and 359 0.60 0.30 308 309/fill 2.0 pit Filled by 308 0.55 0.40 309 309 cut 2.0 pit Filled by 310 0.90 0.18 311 311 cut 3.1 pit Filled by 312 1.70 0.11 313 314 4.0	297	296	fill	3.2	pit	Mid orangish grey clay silt	0.60.	0.26.
299 299 101 3.1 pit Pale grey brown silly clay 0.95 0.30 300 301 3.1 pit Light brown silly clay 1.80 0.27 301 301 cut 3.1 pit Filled by 300 1.80 0.27 302 303 fill 3.2 ditch Light grey chalky silt 0.96 0.18 303 303 cut 3.2 ditch Filled by 302 0.96 0.18 304 305 fill 0.0 pit Filled by 304 0.70 0.21 305 307 cut 2.0 pit Filled by 304 0.70 0.21 306 307 full 2.0 pit Filled by 306 and 359 0.60 0.30 308 309 fill 2.0 pit Filled by 308 0.55 0.40 309 sup cut 2.0 pit Filled by 310 0.90 0.18 311 311 cut 3.1 pit Filled by 312 1.70 0.11	298	298	cut	3.1	pit	Filled by 299	0.95	0.30
300 301 iii 31.1 pit Light Drown silly clay 1.80 0.27 301 301 cut 3.1 pit Filled by 300 1.80 0.27 302 303 fill 3.2 ditch Light grey chalky silt 0.96 0.18 303 303 cut 3.2 ditch Filled by 302 0.96 0.18 304 305 fill 0.0 pit Light grey silty chalk 0.70 0.21 306 307 cut 2.0 pit Filled by 306 and 359 0.60 0.30 308 309 fill 2.0 pit Filled by 308 0.55 0.40 309 309 cut 2.0 pit Filled by 308 0.55 0.40 301 311 fill 3.1 pit Filled by 310 0.90 0.18 312 313 fill 4.0 pit Filled by 312 1.70 0.11 313 313 cut 4.0 pit Filled by 312 1.20<	299	298	fill	3.1	pit	Pale grey brown silty clay	0.95	0.30
301 301 301 301 1.80 0.27 302 303 fill 3.2 ditch Light grey chalky silt 0.96 0.18 303 303 cut 3.2 ditch Filled by 302 0.96 0.18 304 305 fill 0.0 pit Light grey silty chalk 0.70 0.21 305 305 cut 0.0 pit Filled by 304 0.70 0.21 306 307 fill 2.0 pit Filled by 306 and 359 0.60 0.30 308 309 fill 2.0 pit Filled by 308 0.55 0.40 309 309 cut 2.0 pit Filled by 302 0.90 0.18 311 311 cut 3.1 pit Filled by 310 0.90 0.18 311 311 cut 3.1 pit Filled by 312 1.70 0.11 313 316 4.0 pit Filled by 312 1.70 0.11 314 316 <	300	301	fill	3.1	pit	Light brown silty clay	1.80	0.27
302 303 [nill 3.2 ditch Light grey charky sitt 0.96 0.18 303 303 cut 3.2 ditch Filled by 302 0.96 0.18 304 305 fill 0.0 pit Light grey sity chalk 0.70 0.21 306 307 fill 2.0 pit Filled by 304 0.70 0.21 306 307 fill 2.0 pit Filled by 306 and 359 0.60 0.30 308 309 fill 2.0 pit Filled by 308 0.55 0.40 309 sol 2.0 pit Filled by 308 0.55 0.40 309 sol 311 fill 3.1 pit Light brown grey silty clay 0.90 0.18 311 311 cut 3.1 pit Filled by 310 0.90 0.18 312 313 fill 4.0 pit Filled by 312 1.70 0.11 313 316 cut 4.0 pit Filled by 313 and 315 1.20 0.30	301	301	CUT	3.1	pit	Filled by 300	1.80	0.27
303 303 clut 3.2 ditch Filled by 302 0.96 0.18 304 305 fill 0.0 pit Light grey silty chalk 0.70 0.21 305 305 cut 0.0 pit Filled by 304 0.70 0.21 306 307 cut 2.0 pit Dark brown silty clay 0.50 0.20 307 307 cut 2.0 pit Filled by 306 and 359 0.60 0.30 308 309 fill 2.0 pit Filled by 308 0.55 0.40 309 301 2.0 pit Filled by 308 0.55 0.40 310 311 fill 3.1 pit Light brown grey silty clay 0.90 0.18 3112 313 fill 4.0 pit Filled by 312 1.70 0.11 313 313 cut 4.0 pit Dark orangey grey clayish silt 1.20 0.23 316 fill 4.0 pit Dark orange grey clayish silt 1.20 0.53 316<	302	303	fill	3.2	ditch	Light grey chalky slit	0.96	0.18
304 305 0.0 pit Light grey sinty chark 0.70 0.21 305 305 cut 0.0 pit Filled by 304 0.70 0.21 306 307 fill 2.0 pit Dark brown silty clay 0.60 0.30 308 309 fill 2.0 pit Grey silty clay 0.45 0.40 309 309 cut 2.0 pit Filled by 308 0.55 0.40 310 311 fill 3.1 pit Light brown grey silty clay 0.90 0.18 311 311 cut 3.1 pit Filled by 310 0.90 0.18 311 311 cut 3.1 pit Filled by 312 1.70 0.11 313 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Mid grey clayish silt 1.80	303	303	CUT	3.2	alten	Filled by 302	0.96	0.18
305 305 cut 0.0 pit Piter Pilled by 304 0.70 0.72 306 307 fill 2.0 pit Dark brown sity clay 0.50 0.20 307 307 cut 2.0 pit Filled by 306 and 359 0.60 0.30 308 309 fill 2.0 pit Grey sity clay 0.45 0.40 309 309 cut 2.0 pit Filled by 308 0.55 0.40 310 311 fill 3.1 pit Light brown grey silty clay 0.90 0.18 311 311 cut 3.1 pit Filled by 310 0.90 0.18 312 313 fill 4.0 pit Filled by 312 1.70 0.11 313 313 cut 4.0 pit Dark greyish brown clayish silt 1.20 0.33 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.23 316 316 cut 4.0 pit Filled by 313 and 315 1.20 0.53 317 319 fill 4.0 pit Mid g	304	305	TIII	0.0	pit	Light grey slity chaik	0.70	0.21
306 307 linit 2.0 pit Dark brown siny day 0.30 0.50 0.20 307 307 cut 2.0 pit Filled by 306 and 359 0.60 0.30 308 309 fill 2.0 pit Grey silty clay 0.45 0.40 309 309 cut 2.0 pit Filled by 308 0.55 0.40 310 311 fill 3.1 pit Filled by 310 0.90 0.18 311 311 cut 3.1 pit Filled by 312 1.70 0.11 313 313 cut 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.23 316 316 cut 4.0 pit Filled by 313 and 315 1.20 0.53 317 319 fill 4.0 pit Filled by 317 and 318 1.80 0.20 318 319 fill 4.0 pit Filled by 320	305	305	eut	0.0	pit	Filled by 304	0.70	0.21
307 307 200 pit Filled by 300 and 339 0.00 0.30 308 309 fill 2.0 pit Grey silty clay 0.45 0.40 301 311 fill 3.1 pit Filled by 308 0.55 0.40 310 311 fill 3.1 pit Filled by 310 0.90 0.18 311 311 cut 3.1 pit Filled by 312 1.70 0.11 313 313 cut 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Dark orangey grey clayish silt 1.20 0.23 316 316 cut 4.0 pit Filled by 313 and 315 1.20 0.23 316 316 fill 4.0 pit Filled by 317 and 318 1.80 0.20 318 319 fill 4.0 pit Filled by 317 and 318 1.80 0.20 319 319 cut 4.0 pit Filled by 320 0.80 0.11 322 321 fill 2.0	300	207	IIII out	2.0	pit	Eilled by 206 and 250	0.50	0.20
306 309 101 Grey sity day 0.43 0.443 309 309 cut 2.0 pit Filled by 308 0.55 0.40 310 311 fill 3.1 pit Light brown grey silty clay 0.90 0.18 311 311 cut 3.1 pit Filled by 310 0.90 0.11 313 311 cut 4.0 pit Filled by 312 1.70 0.11 313 313 cut 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.23 316 316 cut 4.0 pit Filled by 313 and 315 1.20 0.53 317 319 fill 4.0 pit Mid grey clayish silt 1.80 0.20 318 319 fill 4.0 pit Filled by 317 and 318 1.80 0.70 320 321 fill 2.0 pit Mid grey clayish silt 0.80	200	200	cui fill	2.0	pit	Crow site clov	0.00	0.30
305 305 305 305 305 305 0.35 0.46 310 311 fill 3.1 pit Light brown grey silty clay 0.90 0.18 311 311 cut 3.1 pit Filled by 310 0.90 0.18 312 313 fill 4.0 pit Mid orangey brown clayish silt 1.70 0.11 313 313 cut 4.0 pit Filled by 312 1.70 0.11 314 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Dark orangey grey clayish silt 1.20 0.23 316 316 cut 4.0 pit Mid grey clayish silt 1.80 0.20 318 319 fill 4.0 pit Filled by 317 and 318 1.80 0.70 320 321 fill 2.0 pit Filled by 320 0.80	300	309	uu cut	2.0	pit	Filled by 308	0.45	0.40
316 311 bit Light blown grey sity day 0.50 0.16 311 311 cut 3.1 pit Filled by 310 0.90 0.18 312 313 fill 4.0 pit Mid orangey brown clayish silt 1.70 0.11 313 313 cut 4.0 pit Filled by 312 1.70 0.11 314 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.23 316 316 cut 4.0 pit Filled by 313 and 315 1.20 0.53 317 319 fill 4.0 pit Mid grey clayish silt 1.80 0.20 318 319 fill 4.0 pit Filled by 317 and 318 1.80 0.70 320 321 fill 2.0 pit Filled by 320 0.80 0.11 321 321 cut 2.0 pit Filled by 322 <	309	309	fill	2.0	pit	l inter by 500	0.00	0.40
311 311 311 311 311 311 313 314 316 316 316 316 316 316 316 316 316 316 316 316 316 316 316 311 4.0 pit Filled by 313 313 313 311 1.20 0.23 313 319 fill 4.0 pit Filled by 313 313 1.20 0.20 313 319 full 4.0 pit Mottled mid orange grey san	310	311	cut	3.1	pit	Filled by 310	0.30	0.10
312 313 cut 4.0 pit Filled by 312 1.70 0.11 313 313 cut 4.0 pit Filled by 312 1.70 0.11 314 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.23 316 316 cut 4.0 pit Dark orangey grey clayish silt 1.20 0.23 317 319 fill 4.0 pit Mid grey clayish silt 1.80 0.20 318 319 fill 4.0 pit Mottled mid orange grey sandy silt 1.80 0.20 319 319 cut 4.0 pit Filled by 317 and 318 1.80 0.70 320 321 fill 2.0 pit Filled by 320 0.80 0.11 321 321 cut 2.0 pit Filled by 322 0.28 0.09 323 323 cut 2.0 gully/posthole	312	313	fill	3.1 4.0	pit	Mid orangev brown clavish silt	1 70	0.10
316 316 11.0 0.11 314 316 fill 4.0 pit Dark greyish brown clayish silt 1.20 0.30 315 316 fill 4.0 pit Dark orangey grey clayish silt 1.20 0.23 316 316 cut 4.0 pit Filled by 313 and 315 1.20 0.53 317 319 fill 4.0 pit Mid grey clayish silt 1.80 0.20 318 319 fill 4.0 pit Mottled mid orange grey sandy silt 1.80 0.20 319 319 cut 4.0 pit Filled by 317 and 318 1.80 0.70 320 321 fill 2.0 pit Filled by 320 0.80 0.11 321 321 cut 2.0 pit Filled by 322 0.28 0.09 323 323 cut 2.0 gull/posthole Light grey silty clay 0.65 0.11 325 325 cut 2.0 ditch Light grey silty clay 0.65 0.11 326 3	313	313	cut	4.0	pit	Filled by 312	1.70	0.11
315 316 112 0.00 315 316 fill 4.0 pit Dark orangey grey clayish silt 1.20 0.23 316 316 cut 4.0 pit Filled by 313 and 315 1.20 0.53 317 319 fill 4.0 pit Mid grey clayish silt 1.80 0.20 318 319 fill 4.0 pit Mottled mid orange grey sandy silt 1.80 0.20 319 319 fill 4.0 pit Mottled mid orange grey sandy silt 1.80 0.20 320 321 fill 2.0 pit Mid grey clayish silt 0.80 0.11 321 321 cut 2.0 pit Filled by 320 0.80 0.11 322 323 fill 2.0 gully/posthole Light grey silty chalk 0.28 0.09 323 323 cut 2.0 gully/posthole Filled by 322 0.28 0.09 324 325 fill 2.0 ditch Filled by 324 0.65<	314	316	fill	4.0	nit	Dark grevish brown clavish silt	1.70	0.11
316 316 110 pit Filled by 313 and 315 1.20 0.53 317 319 fill 4.0 pit Mid grey clayish silt 1.80 0.20 318 319 fill 4.0 pit Mottled mid orange grey sandy silt 1.80 0.20 318 319 fill 4.0 pit Mottled mid orange grey sandy silt 1.80 0.20 319 319 cut 4.0 pit Filled by 317 and 318 1.80 0.70 320 321 fill 2.0 pit Mid grey clayish silt 0.80 0.11 321 321 cut 2.0 pit Filled by 320 0.80 0.11 322 323 fill 2.0 gully/posthole Light grey silty chalk 0.28 0.09 323 323 cut 2.0 gully/posthole Filled by 322 0.28 0.09 324 325 fill 2.0 ditch Light grey silty clay 0.65 0.11 325 325 cut 2.0 ditch	315	316	fill	4.0	pit	Dark grangev grev clavish silt	1.20	0.00
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319 319 xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	318	319	fill	4 0	pit	Mottled mid orange grev sandy silt	1 80	0.20
320 321 fill 2.0 pit Mid grey clayish silt 0.80 0.11 321 321 cut 2.0 pit Filled by 320 0.80 0.11 322 323 fill 2.0 gully/posthole Light grey silty chalk 0.28 0.09 323 323 cut 2.0 gully/posthole Filled by 322 0.28 0.09 324 325 fill 2.0 ditch Light grey silty clay 0.65 0.11 325 325 cut 2.0 ditch Filled by 324 0.65 0.11 326 327 fill 3.1 ditch Filled by 324 0.65 0.11 326 327 full 3.1 ditch Filled by 326 0.70 0.52 327 327 cut 3.1 ditch Filled by 326 0.70 0.52 328 329 fill 2.0 pit Mid grey silty clay 0.65 0.24 329 329 cut 2.0 pit Filled by 328 0.65 0.24 330 31 fill 2.0 gully Mid grey silty c	319	319	cut	4.0	pit	Filled by 317 and 318	1.80	0.20
321 321 321 and good state and good	320	321	fill	2.0	pit	Mid grev clavish silt	0.80	0.11
322 323 fill 2.0 gully/posthole Light grey silty chalk 0.28 0.09 323 323 cut 2.0 gully/posthole Filled by 322 0.28 0.09 324 325 fill 2.0 ditch Light grey silty clay 0.65 0.11 325 325 cut 2.0 ditch Filled by 324 0.65 0.11 326 327 fill 3.1 ditch Filled by 324 0.65 0.11 326 327 fill 3.1 ditch Filled by 326 0.70 0.52 327 327 cut 3.1 ditch Filled by 326 0.70 0.52 328 329 fill 2.0 pit Mid grey silty clay 0.65 0.24 329 329 cut 2.0 pit Filled by 328 0.65 0.24 330 331 fill 2.0 gully Mid grey silty clay 0.31 0.12	321	321	cut	2.0	pit	Filled by 320	0.80	0.11
323 323 323 composition and the state composition	322	323	fill	2.0	gullv/posthole	Light grev silty chalk	0.28	0.09
324 325 fill 2.0 ditch Light grey silty clay 0.65 0.11 325 325 cut 2.0 ditch Filled by 324 0.65 0.11 326 327 fill 3.1 ditch Mid grey silty clay 0.70 0.52 327 327 cut 3.1 ditch Filled by 326 0.70 0.52 328 329 fill 2.0 pit Mid grey silty clay 0.65 0.24 329 329 cut 2.0 pit Filled by 328 0.65 0.24 330 331 fill 2.0 gully Mid grey silty clay 0.31 0.12	323	323	cut	2.0	gully/posthole	Filled by 322	0.28	0.09
325 325 cut 2.0 ditch Filled by 324 0.65 0.11 326 327 fill 3.1 ditch Mid grey silty clay 0.70 0.52 327 327 cut 3.1 ditch Filled by 326 0.70 0.52 328 329 fill 2.0 pit Mid grey silty clay 0.65 0.24 329 329 cut 2.0 pit Filled by 328 0.65 0.24 330 331 fill 2.0 gully Mid grey silty clay 0.31 0.12	324	325	fill	2.0	ditch	Light grey silty clav	0.65	0.11
326 327 fill 3.1 ditch Mid grey silty clay 0.70 0.52 327 327 cut 3.1 ditch Filled by 326 0.70 0.52 328 329 fill 2.0 pit Mid grey silty clay 0.65 0.24 329 329 cut 2.0 pit Filled by 328 0.65 0.24 330 331 fill 2.0 gully Mid grey silty clay 0.31 0.12	325	325	cut	2.0	ditch	Filled by 324	0.65	0.11
327 327 cut 3.1 ditch Filled by 326 0.70 0.52 328 329 fill 2.0 pit Mid grey silty clay 0.65 0.24 329 329 cut 2.0 pit Filled by 328 0.65 0.24 330 331 fill 2.0 gully Mid grey silty clay 0.31 0.12	326	327	fill	3.1	ditch	Mid grey silty clay	0.70	0.52
328 329 fill 2.0 pit Mid grey silty clay 0.65 0.24 329 329 cut 2.0 pit Filled by 328 0.65 0.24 330 331 fill 2.0 gully Mid grey silty clay 0.31 0.12	327	327	cut	3.1	ditch	Filled by 326	0.70	0.52
329 329 cut 2.0 pit Filled by 328 0.65 0.24 330 331 fill 2.0 gully Mid grey silty clay 0.31 0.12	328	329	fill	2.0	pit	Mid grey silty clay	0.65	0.24
330 331 fill 2.0 gully Mid grey silty clay 0.31 0.12	329	329	cut	2.0	pit	Filled by 328	0.65	0.24
	330	331	fill	2.0	gully	Mid grey silty clay	0.31	0.12
331 331 cut 2.0 gully Filled by 330 0.31 0.12	331	331	cut	2.0	gully	Filled by 330	0.31	0.12

Context	Cut	Category	Phase	Feature Type	Fine component	Width m	Depth m
332	333	fill	2.0	beamslot	Light grey silty clay	2.00	0.30
333	333	cut	2.0	beamslot	Filled by 332	2.00	0.30
334	335	fill	2.0	beamslot	Light grey silty clay	0.34	0.09
335	335	cut	2.0	beamslot	Filled by 334	0.34	0.09
336	337	fill	2.0	Slot	Light grey silty clay	0.35	0.09
337	337	cut	2.0	slot	Filled by 336	0.35	0.09
338	339	fill	2.0	pit	Mid grey silty clay	0.60	0.11
339	339	cut	2.0	pit	Filled by 338	0.60	0.11
340	342	fill	4.0	pit	Pale whitish grey clayish silt	2.90	0.30
341	342	fill	4.0	pit	Dark greyish brown clayish silt	0.41	0.60
342	342	cut	4.0	pit	Filled 340 and 341	0.40	0.60
343	344	fill	4.0	pit	Pale greyish brown clayish silt	2.90	0.30
344	344	cut	4.0	pit	Filled by 343	2.90	0.30
345	346	fill	4.0	pit	Light grey silty clay	1.00	0.55
346	346	cut	4.0	pit	Filled by 345	1.00	0.55
347	348	fill	4.0	pit	Light grey silty clay	2.00	0.30
348	348	cut	4.0	pit	Filled by 347 and 356	2.00	0.46
349	351	fill	4.0	pit	Dark grey silty clay	1.30	0.40
350	351	fill	4.0	pit	Light gry silty clay	1.20	0.60
351	351	cut	4.0	pit	Filled by 349 and 350	1.30	0.80
352	353	fill	4.0	pit	Light brown silty clay	1.40	0.50
353	353	cut	4.0	pit	Filled by 352	1.40	0.50
354	355	fill	4.0	pit	Dark brown silty clay	2.20	0.40
355	355	cut	4.0	pit	Filled by 354	2.20	0.40
356	348	fill	4.0	pit	Dark brown silty clay		
357	358	fill	4.0	pit	Dark brown silty clay	0.70	0.35
358	358	cut	4.0	pit	Not recorded	0.60	0.15
359	307	fill	2.0	pit	Mid orangey grey silty clay	0.60	0.15
360	361	fill	2.0	Structure	Mid orangey grey silty clay	0.20	0.18
361	361	cut	2.0	Structure	Filled by 360	0.20	0.18
362	363	fill	3.2	Structure	Grey silty clay	0.41	0.51
363	363	cut	3.2	Structure	Filled by 362	0.41	0.51
364	0	layer	4.0		Dark brownish grey clay silt	0.80	0.30

0.30

Appendix 2: The metalwork

by Nina Crummy

The majority of the objects in the assemblage are iron and date to the medieval, post-medieval or modern periods. The exception is a small Roman copper-alloy Rearhook brooch, which dates to c AD 40-60/5. Its form is unusual, with a prominent conical boss placed at the base of the bow. The inverted V-shaped foot with terminal knob is similar to that on a brooch from Saham Toney in Norfolk (Brown 1986, fig. 16, 87). The method of securing the spring by a rearward-facing hook appears to have been developed by the Iceni, although these brooches are found beyond Icenian territory (Mackreth 1992, 122-3). Found in a medieval ditch, this example is clearly residual, perhaps having been turned up by the plough.

Part of an iron bit from buried soil (53) is of a size suitable for a pony or small horse and probably dates to the later post-medieval or modern period. A small iron scraper or spatula, originally fitted with a wooden handle, came from the subsoil and is also late post-medieval or modern. It may have been used for stripping plaster or paintwork, or perhaps as an artist's tool.

The remainder of the ironwork consists mainly of nails and small fragments of sheet; none of the latter retains features that hint at their function.

Catalogue

SF 1. (47). Fill of ditch **48**. Phase 3.2. Small copper-alloy Rearhook brooch. Length 27 mm. The spring and pin are missing, as is most of the catchplate. There is a boss at the base of the bow, and the foot is an inverted V, terminating in a small knob.

SF 6. <7>. (18). Fill of circular structure **19**. Phase 3.2. Short shank fragment, possibly from a small nail. Length 12 mm.

SF 100. (112). Fill of circular structure **113**. Phase 3.2 Large fragment of thin sheet iron, irregularly curved on the short axis, with a large hole placed centrally near one end. Length 161 mm, width 78 mm.

SF 101. (119). Fill of circular structure **118**. Phase 32. Fragment of thin iron sheet. 56 by 44 mm.

SF 108. (340). Fill of ?quarry **342**. Phase 4. Two ?fitting fragments of double thickness thin sheet iron. Maximum dimensions: 147 by 178 mm; 94 by 94 mm.

SF 109. (340). Fill of ?quarry **342**. Phase 4. Five fragments of thin iron sheet, probably all originally part of SF 108 above. The two largest are double thickness. Maximum dimensions: 31 by 36 mm; 26 by 32 mm; 18 by 24 mm; 17 by 40 mm; 18 by 19 mm.

SF 112. (341). Fill of ?quarry **342**. Phase 4. Fragment of thin iron sheet with small rivets for attachment; bent over at one end. Maximum dimensions: 25 by 47 mm.

SF 111. (341). Fill of ?quarry **342**. Phase 4. Fragment of an iron bar or thick iron sheet, slightly curved on the long axis. Maximum dimensions 24 by 51 mm.

SF 106. (356). Fill of ?quarry **348**. Phase 4. Two ?fitting fragments of thin iron sheet. Maximum dimensions: 67 by 71 mm; 50 by 76 mm.

SF 107. (350). Fill of ?quarry **351**. Phase 4. Seven fragments of thin iron sheet, all originally fitting but damaged at the breaks so that not all can now be joined to the main section. The main section is double thickness. Maximum dimensions: 123 by 60 mm (three fitting fragments); 22 by 43 mm; 20 by 26 mm; 16 by 27 mm; 15 by 19 mm.

SF 105. (252). Fill of square pit **253**. Phase 4. Iron nail with ?square head, tip of shank missing. Length 38 mm.

SF 104. (256). Fill of ?quarry **254**. Phase 4. Iron nail with flat square/rectangular head; complete apart from the very tip of the shank. Length 54 mm.

SF 102. (276). Fill of ditch **275**. Phase 4. Tapering iron bar, probably part of a large nail or a hinge-pivot. Length 87 mm.

SF 103. (314). Fill of pit **316**. Phase 4. Iron nail with ?rectangular head, tip of shank missing. Length 29 mm.

SF 110. (341). Fill of ?quarry **342**. Phase 4. Two iron rectangular-headed nails, one complete, one with most of the shank missing. Lengths 78 and 23 mm.

SF 4. (53). Buried soil. Phase 4. a) Iron bit for a pony or small horse, with plain solid bar and one surviving side-ring with cheek bar. Length 123 mm. Modern or late post-medieval. b) Iron ?shank fragment. Length 46 mm.

SF 3. (5). Fill of posthole **6**. Modern. Two small fragments of sheet iron, one may be part of a cap or ferrule. Maximum dimensions 33 by 50 mm, 10 by 21 mm.

SF 5. <1>. (5). Fill of posthole **6**. Modern. Five iron shank fragments, one with screw thread. Lengths 28 mm, 17 mm, 14 mm; 9 mm, 7 mm.

SF 2. (2). Subsoil, Unstratified, Iron scraper or spatula with square-section tang. The end of the blade is curved. The burred end of the tang is evidence for a wooden handle. Length 121 mm, maximum width of blade 43 mm.

Bibliography

Brown, R. A.,	1986	'The Iron Age and Romano-British
		settlement at Woodcock Hall, Saham
		Toney, Norfolk', <i>Britannia</i> 17, 1-58
Mackreth, D. M.	1992	'Brooches of copper alloy and of iron' in A.
		K. Gregory, Excavations in Thetford, 1980-
		82, Fison Way 1, East Anglian Archaeol
		53 (Dereham)

Appendix 3: The lithics

by Barry Bishop

Introduction

Excavations at the above site resulted in the recovery of 22 pieces of struck flint and a small quantity of burnt flint fragments. This report quantifies and describes the material, discusses its significance and recommends any further work that might be necessary to realize the material's research potential. All measurements follow the methodology of Saville (1980).

Quantification

Context	Decortication Flake	Flake	Cortical Blade	Blade	Blade-Like Flake	Retouched	Conchoidal Chunks	Core	Burnt Flint (no)	Burnt Flint (wt:g)	Comments
002						1					
047						1					
135		1									Core trimming
158		1							6	14	Flake Fragment
166									3	18	
174		1									
176		1									
199		1	1	1			1	1	1	40	
209									3	13	
211				1							
213					1						Core Trimming
234				1							
245	1										
255						1			1	31	
273					1						Burnt
273									1	12	
295		1									
314		1		1							
317									1	24	
332									2	25	
338	1	1									
Totals	2	8	1	4	2	3	1	1	18	177	

Table 1: Quantification of Lithic Material by Context

Burnt Flint

Eighteen fragments of burnt flint weighing 177g were recovered from a variety of features, the largest quantity from any single context being 40g. The flint was burnt to a high degree, causing it to change colour and become firecracked, consistent with it having been in a hearth. Burnt flint is most commonly found on prehistoric sites and indicates activity in the form of hearth-use, but is intrinsically undateable once removed from the ground.

Condition

The flint was in a variable but mostly good and sharp condition, not withstanding the effects of recortication described below. Its condition would be consistent with its recovery from mostly Medieval or later features, although even the residual pieces were unlikely to have travelled far from where originally discarded. All of the struck pieces had recorticated to a white or bluish white colour, typical of flint artefacts recovered from sites on chalk substrata. This had occasionally resulted in some of the thinner edges of the flakes becoming friable and partially disintegrating.

Raw Materials

The raw materials used consisted of flint with a variably thick, abraded chalky or rolled cortex. The size of the resultant flakes suggests that moderately small, thermally flawed rounded nodules were used. Recent breaks on some of the pieces revealed the raw materials to be composed of translucent grey or black flint of good knapping quality, typical of the glacially affected nodular flint found in the locality, either from glacial till or relatively unrolled alluvial deposits.

Description

Twenty-two pieces of struck flint were recovered (see Table 1). The majority of the pieces, including the decortication and trimming flakes, the conchoidally fractured chunk and the core may be regarded as waste products from reduction, and indicate that knapping was occurring at the site. The three retouched pieces demonstrate that some tool use was also being practiced. These consisted of a thick cortical flake measuring 43mm X 39mm X 15mm, recovered from context [255], which had a minimally retouched distal end forming a convex end-scraper. Context [002] similarly contained a thick cortical flake with light to heavy retouch around its distal end, also representing a convex end-scraper. This piece also had unusual invasive basal retouching on its ventral side near the bulbar end, possibly designed to aid handling. The implement from context [047] consisted of a narrow flake with steep scalar retouch along both of the longer margins. Both ends were missing but this could represent either a relatively under-used fabricator, or, more likely, a scraper akin to the thumbnail varieties. It measured >28mm X 19mm X 6mm.

One core was present, recovered from context [199]. It comprised an extensively reduced multiplatformed core with numerous striking platforms and some narrow flake/blade removals. It was globular shaped and weighed 42g.

The blade from context [314] was also of interest. This was notably larger than the others, measuring 73mm X 29mm X 11mm, and it consisted of a plunged blade retaining a portion of a right-angled striking platform on its base.

The excavators identified two features at the site as being of possible prehistoric date. Pit [167] contained only burnt flint and, whilst this cannot be dated, it certainly indicates hearth-based activity near the pit. In addition to

further burnt flint, pit [159] also produced a laterally split flake (siret flake) although, due to its fragmentary nature, this can only be broadly assigned to the prehistoric period.

Discussion

Technologically, the assemblage was dominated by pieces derived from systematic blade production strategies, which include the blades, blade-like flakes, the core and the trimming flakes. Such strategies are characteristic of Mesolithic and Early Neolithic industries, the high quality of blade production tentatively suggesting the earlier period may be more likely. Some of the other flakes could be of a later date and some support for suggestions of later flintworking may be provided by the retouched implement from context 47 (ditch 48): either a small fabricator or a thumbnail type scraper. If the latter, this would be typically of Early Bronze Age date. The two scrapers could not be precisely dated and may have been manufactured during any period from the Mesolithic to the Bronze Age.

The struck flint assemblage therefore indicates activity at the site during the Mesolithic and possibly later. Its size does not suggest intensive occupation at the site, although both flint reduction and tool use is attested, but is perhaps most suggestive of low-key activity occurring within the context of a more widely inhabited landscape. Extensive prehistoric activity, identified in the form of both scatters and sealed contexts, dating from the Mesolithic and beyond is amply demonstrated along the southeastern Fen edge, including close by at Fordham and Soham (eg Mortimer forthcoming; Edmonds *et al.* 1999).

Recommendations

Due to its size, this report is all that is required for the purposes of archive and no further analysis is recommended. It does contribute to the broader understanding of prehistoric activity along the southeastern Fen edge and it is therefore recommended that a short description of the assemblage, as may be gleaned from this report, should be included in any published account of the fieldwork.

Bibliography

Edmonds, M., Evans, C. and Gibson, D.	1999	Assemblage and Collection – Lithic Complexes in the Cambridgeshire Fenlands. <i>Proceedings of the Prehistoric</i> <i>Society</i> 65, 47 – 82.
Mortimer, R.	(forthcoming)	CAMARC Fordham Bypass Report
Saville, A.	1980	On the Measurement of Struck Flakes and Flake Tools. <i>Lithics</i> 1, 16-20.

Appendix 4: Post Medieval and Early Modern glass

by Carole Fletcher

Introduction and Background

The evaluation and subsequent excavation at Kingfisher Drive Burwell, Cambridgeshire produced a small glass assemblage of 10 sherds weighing 0.071kg. The material from the topsoil and any unstratified material are included in these totals.

Methodology

The basic guidance in the Management of Archaeological Projects (MAP2) has been adhered to (English Heritage 1991). Dating was carried out using CAM ARC's in-house system. All shards have been counted, classified and weighed

CAM ARC curates the glass and archive until formal deposition.

The Assemblage

Four contexts generated the small assemblage of five shards of window glass weighing 0.047kg and five shards of vessel glass, from three separate vessels, weighing in total 0.024kg.

Manufacture and Dating

The window glass assemblage consists of moderately sized sherds of glass.

Context 1 produced three shards the largest is clear colourless glass its thickness varying between 2.81 and 2.87mm with some slight clouding of one surface. The second shard is clear colourless glass with a slight blue green tint and 2.7mm thick, the third shard is similar and 3.03 to 3.06mm thick. Context 2 produced two shards of clear colourless glass with a slight blue green tint, 2.97mm thick.

When examined the shards of window glass show little visual distortion, which suggests that these are not hand blown glass. The pottery assemblage associated with these two contexts dates them to the late 18th century. The glass is likely to be more than a century older and may be machine drawn cylinder glass (1910 to 1933) or flat drawn sheet first produced in the United Kingdom in 1919.

The vessel glass is more varied; context 1 produced a single curved shard of clear colourless glass, weighing 0.005kg from the neck of a likely to be 19th or early 20th century. In context 100 were two sherds of green bottle glass

weighing 0.017kg. Both sherds show light surface delamination and are likely to be from an 18th or 19th century bottle.

In context 340 were two thin (1mm) pale green glass shards from a cylindrical small bottle or phial. An early 17th century date was suggested by the pottery assemblage of context 340, however the glass could be as early as 1600 or as late as 1800.

Conclusion

The glass assemblage is small, the window glass may have come from an early 20th century source and the bottle glass is from 18th and 19th century wine bottles. The small shards of glass from context 340 may once have contained fine perfumed oil or a treatment for gout. The lack of glass in the assemblage is not unsurprising it is not a common material on domestic medieval sites or late medieval sites, and the date of this assemblage lies outside of the medieval period and is not therefore associated with the main period of occupation of the site.

Bibliography

English Heritage

1991

Management of Archaeological Projects (MAP2)

Appendix 5: Post Roman pottery

by Carole Fletcher

Introduction and Background

The evaluation and subsequent excavation at Kingfisher Drive Burwell, Cambridgeshire produced a small pottery assemblage of only 142 sherds, weighing 2.871kg. The material from the topsoil and any unstratified material are included in these totals.

Ceramic fabric abbreviations used in the following text and dating table are:

Bichrome	BICR
Bone China	BCHIN
Bourne D or Colne	BONC
Brill	BRILL
Cistercian ware	CSTN
Colchester type ware	COLST
Early Medieval Essex Micaceous Sandy ware	EMEMS
Early Medieval ware	EMW
Frechen stoneware	FREC
Sible Hedingham	HEDI
Late medieval Ely ware	LMEL
Medieval Ely type ware	MELT or
	MELT(C)
Medieval Essex Micaceous Sandy ware	MEMS
Mill Green coarse ware	MGC
Post-medieval Black Glazed ware	PMBL
Post-medieval Red wares	PMR
Refined Earthenware	RFE
South Cambridgeshire Early Medieval Ware	SCAMEMW
Sandy ware	SW
Stafordshire Slip ware	STSL
Transitional Redwares	TRAN
Transfer Printed wares	TRANS

Methodology

The basic guidance in the Management of Archaeological Projects (MAP2) has been adhered to (English Heritage 1991). In addition the Medieval Pottery Research Group (MPRG) documents Guidance for the processing and publication of medieval pottery from excavations (Blake and Davey, 1983), A guide to the classification of medieval ceramic forms (MPRG, 1998) and Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics (MPRG, 2001) act as a standard.

Dating was carried out using CAM ARC's in-house system based on that previously used at the Museum of London. Fabric classification has been carried out for all previously described types. All sherds have been counted, classified and weighed. All the pottery has been spot dated on a context-by-context basis (see Table app5.1)

The pottery and archive are curated by CAM ARC until formal deposition.

The Assemblage

Fieldwork generated a small assemblage of 142 sherds, weighing 2.871kg from forty-three contexts, (eight contexts from the evaluation and thirty-five from the excavation) out of a total of 364 contexts. This material consists mainly of moderately abraded pottery. The periods represented by the assemblage are: prehistoric (context 248), Roman (all residual in later features), medieval and post medieval to early 19th century. The largest pottery group is medieval and the sherds are distributed throughout most of the assemblage.

Few features have more than one context containing pottery and the majority of contexts produced no pottery. This and the quantity of pottery produced has made the assemblage difficult to assess on grounds of site phase, as a result statistical analysis of the sherds is not viable. The assemblage is discussed therefore in terms of ceramic dates rather than stratigraphic phasing.

The earliest material present, four prehistoric sherds of indeterminate date were recovered from a single context. Nine sherds of Roman pottery were also recovered mainly as a residual element in medieval and later contexts; only context 290 contains solely Roman material unfortunately this is only a single sherd weighing 0.003kg.

Twenty-one contexts are medieval in date (see dating table) spanning the 13th and 14th centuries. The main fabrics present in these contexts are MELT including a coarse variant and MEMS in addition there are a small number of BRILL and HEDI sherds and a single piece of an MGC jar in context 267. Vessel types represented are mainly jars most commonly MELT(C) and MEMS. Six jug sherds were recovered representing at least four different vessels. These include fragments of both HEDI and BRILL jugs and an unglazed MELT vessel. Only three bowls sherds were recognised all in MELT fabrics and a possible curfew sherd was also identified.

Pottery assemblages from ten contexts date (table 00) to the 15th to late 16th century and these alongside two contexts dating wholly to the 16th century contain mainly COLST or TRAN jug sherds with very few residual sherds. The two contexts with a 16th to 17th century date contain mainly BONC and a further 17th century context contains a single sherd of FREC drinking jug alongside a sherd from a PMBL drinking vessel. Context 340 contains both residual medieval HEDI and MELT alongside sherds of BICR, BONC and STSL this context was dated to the early 17th century.

Only two contexts date to the 18th century, contexts 1 and 2, of these contexts 2 is the more interesting containing residual Roman and medieval fabrics alongside post medieval CSTN, PMR and TRANS. These contexts represent the normal mix of fabrics likely to be seen in the cleaning of a site or topsoil recording. Two further contexts 100 and 255 date to the early to mid 19th century and contain BCHIN and YELL.

Fabrics from Cambridgeshire make up the majority of the assemblage in the 12th, 13th and 14th centuries with fabrics produced in Ely, its environs and the fens. The secondary production source at this time appears to be Essex with HEDI, MEMS and MGC. This is mirrored in the medieval period in the types of vessels present. Jars are mainly in MELT/MELT(C) from Cambridgeshire with some few MEMS jars from Essex. Jugs have a more even distribution between both local and non-local fabrics and include sherds from Buckinghamshire (BRILL) as well as Essex (HEDI).

The 15th and 16th century Essex fabrics become more common with COLST present in many contexts. Transitional wares are also present and it is unclear if these are Essex or Cambridgeshire products as Ely also produces redwares in this period. The number of 17th, 18th and 19th century contexts are too small to draw clear conclusions about provenance other than to say they appear to follow the common pattern for this region. That is to say new fabrics and forms appear from further outside the region including the importation of continental stonewares and as transportation and communication improve in the 18th century the pots from the earthenware industries of the midlands become common.

Conclusion

The assemblage is small and almost all of the material is moderately abraded, suggesting some reworking after initial deposition. The assemblage has no complete vessels, no sherds worthy of illustration and full statistical analysis is not viable. Despite this there is a strong indication of medieval domestic activity across the site, with a continuation of activity into the 16th and 17th centuries. Although the assemblage is too small to be certain if this is a true reflection of pottery usage on the site.

No preservation bias has been recognised and no long-term storage problems are likely.

Context	Fabric	Sherd Count	Sherd Weight	Form	Assessment date range
1	Plant Pot	2	0.02	plant pot	1780+
	PMR	1	0.018	Bowl	
	Redware	1	0.001		
	ROMAN	1	0.019		
	TRANS	1	0.001		
2	Annular Ware	1	0.003		post 1790
	CSTN	3	0.002	Drinking Vessel	
	CSW	1	0.005		
	MELT	1	0.005		
	PMR	2	0.039	Bowl	
	RFE	2	0.003		
	TRAN	1	0.007		
	TRANS	2	0.006		
9	MELT	1	0.014	Jar	13th-mid 14th century
	ROMAN	1	0.011		

Spot-dating table

Context	Fabric	Sherd Count	Sherd Weight	Form	Assessment date range
16	MELT	2	0.017		13th-mid 14th century
	MELT	1	0.034	Bowl	
	MEMS	4	0.045		
18	MELI	1	0.021	Jar	13th-mid 14th century
20	COLST	2	0.015	Jug	15th to mid 16th contury
53	ROMAN		0.049		15th to mid 16th century
60	NEOT	2	0.013		13th century
	ROMAN	3	0.001		Toth century
	SW	1	0.006		
100	BCHIN	1	0.002	saucer	Early to mid 19th century
	MELT	2	0.015		
	PMBL	1	0.004	Drinking Vessel	
	PMR	1	0.014		
	STONEWARE	1	0.036		
	UNK	1	0.004		
112	MELT(C)	1	0.006		13th to late 14th century
404		4	0.000	lua	13th to late
121	MELT(C)	1	0.068	Jug	14th century
122		1	0.013	Jai	12th to late 14th contury
122	MELT(C)		0.010	lar	13th to late 14th century
135	TRAN/ COL ST	1	0.022	Bowl	
137	MELT(C)	1	0.000	Jar	13th to late14th century
176	MELT(C)	2	0.01	Bowl	13th to late14th century
	UNK	1	0.015	Jua	
177	EMW	2	0.018	Jar	13th to late14th century
	MELT(C)	1	0.013		
	MEMS	1	0.007		
226	MEMS	1	0.005		13th to late14th century
228	MELT(C)	1	0.013	Jar	13th to late14th century
	MEMS	1	0.008		
000		4	0.007	le r	Early 11th to mid 14th
230	EIVIEIVIS / IVIEIVIS	1	0.007	Jar	Century
233	BONC	3	0.003		16th to mid 17th century
234	SCAMSW	1	0.013		Total to find 17 th century
248	Prehistoric	4	0.013		Prehistoric
252	ROMAN	1	0.001		15th to late 16th century
	TRAN/UNK	2	0.018		, , , , , , , , , , , , , , , , , , ,
255	BONC	1	0.002		Early to mid 19th century
	MELT(C)	1	0.001		
	STONEWARE	1	0.014		
	TRANS	1	0.009		
	YELL	1	0.032	Bowl	
256	BRILL	2	0.006		13th to late14th century
261	COLST	1	0.004		15th to late 16th century
	MEMS	1	0.004	Jar	
267	MEMS	1	0.014	lar	Late 13th to late 14th
207	MGC	1	0.014	Jar	14th century
268	BICR?	1	0.012	5ai	16th century
	BONC	2	0.024		.eeentury
	EMEMS/MEMS	1	0.01		
	EMW	1	0.006	Jar	
	ESMIC	4	0.06		
	MEMS	1	0.005	Jar	
	UNK	1	0.002		
273	COLST	1	0.003		15th to late 16th century
	COLST	1	0.011		
274	TRAN/COLST	2	0.024		15th to late 16th century
276	TRAN/COLST	1	0.026	Jar	15th to late 16th century
070	UNK	1	0.014	Jar	10th to lot of 4th
2/8	SW	1	0.051	Jug	
290	KUMAN LEDI	1	0.003	lua	Koman 13th to mid 14th century
231			0.071	Jug	Tour to mild 14th Century
L	30	1	0.000	Jai	

Context	Fabric	Sherd Count	Sherd Weight	Form	Assessment date range
299	MELT(C)	2	0.033		13th-mid 14th century
300	MELT(C)	4	0.164	Jar	13th-mid 14th century
310	MELT(C)	1	0.045	?Curfew	13th-mid 14th century
	MEMS	1	0.009	Jar	•
314	COLST	2	0.049		Early to mid 16th century
	MEMS	1	0.003		
317	EMEMS/MEMS	1	0.018		15th to late 16th century
	TRAN?	1	0.019	Bowl	
340	BICR?	1	0.035		c 1600
	BONC	1	0.018		
	HEDI	1	0.028	Jug	
	MELT(C)	1	0.005	Jar	
	MELT(C)	1	0.041	Jug	
	ROMAN	1	0.017		
	STSL	1	0.005		
341	MELT(C)	3	0.025		13th-mid 14th century
	MELT(C)	1	0.029	Jar	
	MELT(C)	1	0.008	Jar	
	MELT(C)	1	0.89	Jug	
	SW	1	0.01		
345	FREC	2	0.057	Drinking Vessel	17th century
	PMBL	1	0.013	Drinking Vessel	•
350	TRAN?	1	0.026	Bowl	15th to late 16th century

Bibliography

Blake, H and		Guidelines for the Processing and Publications of Medieval Pottery from Excavations. Directorate of Ancient Monuments and Historic
Davey, P.	1983	Buildings_Occasional_Paper 5
English Heritage	1991	MAP2
		A Guide to the Classification of Medieval Ceramic Forms.
Medieval Pottery		Medieval Pottery Research Group
Research Group	1998	Occasional Paper I

Appendix 6: Ceramic building materials

The majority of the ceramic building materials are very abraded fragments found in phase 4 deposits (see table below). Only two features thought to date to the medieval period contained tile fragments and in both cases these were very small and may be regarded as intrusive.

Context	Cut	Phase	Weight in kg
100	104	4	0.41
234	229	3.2	0.12
252	253	4	0.04
256	254	4	0.48
262	259	4	0.03
274	275	4	0.21
295	294	3.1	0.08
314	316	4	0.11
317	319	4	1.05
340	342	4	0.48
341	342	4	0.12
345	346	4	0.60
350	351	4	0.02
356	348	4	0.70

Appendix 7: The faunal remains

by Chris Faine

Introduction

A total of 55 "countable" bones were recovered from the Kingfisher Drive, Burwell excavations, with a further 47 fragments not identifiable to species, (46% of the total sample). 8.9kg of bone was recovered in total. All bones were collected by hand apart from those recovered from environmental samples; hence a bias towards smaller fragments is to be expected. Residuality appears not be an issue and there is no evidence of later contamination of any context. Faunal remains were recovered from a variety of contexts including pits and ditches largely dating from high to post medieval periods.

Methodology

All data was initially recorded using a specially written MS Access database. All elements identifiable to species and over 25% complete were included in the database. Bones were recorded using a version of the criteria described in Davis (1992) and Albarella & Davis (1997). Initially all elements were assessed in terms of siding (where appropriate), completeness, tooth wear stages (also where applicable) and epiphyseal fusion. Completeness was assessed in terms of percentage and zones present (after Dobney & Reilly, 1988). Initially the whole identifiable assemblage was quantified in terms of number of individual fragments (NISP) and minimum numbers of individuals MNI (see table 1). The ageing of the population was largely achieved by examining the wear stages of cheek teeth of cattle, sheep/goat and pig (after Grant, 1982). The states of epiphyseal fusion for all relevant bones were recorded to give a broad age range for the major domesticates (after Getty, 1975). Any instances of butchery were noted and recorded using a separate table from the main database. The type of lesion, its position, severity and direction were all noted. The presence of any further taphonomy, i.e. burning, gnawing etc was also noted. A separate table for any pathology, giving the position and type of lesion was also used. A variety of metrical analyses were carried out on the assemblage. All measurements were carried out according to the conventions of von den Driesch (1976). Dog withers heights were calculated using Harcourt (1974). Measurements were either carried out using a 150mm sliding calliper or an osteometric board in the case of larger bones.

The Assemblage

The table below shows the species distribution for the entire assemblage. Aside from the large number of dog remain (attributable to the presence of a semi articulated animal) the assemblage is dominated by cattle remains, along with smaller amounts of sheep/goat, pig and horse remains.

Cattle remains from earlier medieval contexts are scarce, consisting of portions of butchered long bones and loose teeth from adult animals. More elements were recovered from post medieval features. These again consisted of butchered long bones along with a higher instance of metapodia and tarsals (again from adult animals). In addition the complete skull of an adult female was recovered from context 340.

Sheep/goat remains were recovered exclusively from Post-Medieval contexts. These consisted entirely of butchered lower limb elements from adult animals. Only two pig elements were recovered again from Post-Medieval contexts.

Dog remains were recovered from two contexts. A semi articulated individual was recovered from pit fill **314**. At least 1 year old, metrical analysis of the long bones suggests an animal around 60cm at the shoulder. This is quite a large animal (around the size of a modern alsatian or large collie) but is within the size range of animal from other contemporary sites (Bourdillon, 1992). Two further dog crania were recovered from an undated pit fill **356**, one significantly larger than the other. A single femur (presumably from the smaller animal) produced a withers height estimate of around 38cm.

A fractured horse mandible along with two molars was recovered from a postmedieval pit fill (341) and aged via crown heights to around 7-8 years of age. Two further loose molars from animal of similar ages were recovered from the fill of a possibly medieval pit (**222**).

Little material was recovered from environmental samples, with two portions of frog long bones being recovered from contexts **100** & **117**, and a femur from an unidentified rodent being recovered from context **101**.

	NISP	NISP%	MNI	MNI%
Cattle (Bos)	21	36.3	10	38.4
Dog (Canis familiaris)	21	36.3	3	11.5
Sheep/Goat (Ovis/Capra)	6	10.3	5	19.2
Pig (Sus scrofa)	4	6.85	4	15.3
Horse (Equus caballus)	3	5.15	1	4
Frog (<i>Rana sp</i> .)	2	3.4	2	7.6
Unid. rodent	1	1.7	1	4
Total	58	100	26	100

Conclusions

Unfortunately the faunal assemblage is extremely small so can provide little information about the site as a whole. However, with respect to the domestic mammals the assemblage appears to suggest general domestic/settlement waste. It appears domestic mammals (cattle in particular) were butchered for meat at physical maturity. Although the increase in non-meat bearing cattle bones in the Post-Medieval period could suggest a change in husbandry practices, as mentioned above the small sample size precludes any further investigation.

Bibliography

Albarella, U. and Davis, S.J.M.	1994	The Saxon and medieval animal bones excavated 1985-1989 from West Cotton, Northamptonshire. Ancient monuments Laboratory Report 17/94.
Bourdillon, J.	1992	Mammal and bird bones from excavations at Little Pickle, Bletchingley, Surrey 1988-9 (LP89). Ancient Monuments Laboratory Report 43/92.
Davis, S. J. M	1992	A rapid method for recording information about mammal bones from archaeological sites. Ancient Monuments Laboratory Report19/92
Dobney, K & Reilly, K	1988	A method for recording archaeological animal bones: the use of diagnostic zones. <i>Circaea</i> 5(2): 79-96
Driesch, A. von den & Boessneck, J.A Kritische	1974	Anmerkungen zur Widerristhohenberechnung aus langmassen vor-und fruhgeschichtlicher Tierknochen, <i>Saugertierkundliche Mitteilungen</i> 22, 325-348
Driesch, A von den	1976	A guide to the measurement of animal bones from archaeological sites, Harvard: Peabody Museum of Archaeology and Ethnology Bulletin 1.
Grant, A.	1982	The use of tooth wear as a guide to the age of domestic ungulates. In B. Wilson, C. Grigson & S. Payne (eds.) <i>Ageing and sexing animal bones from archaeological sites</i> . Oxford: BAR British Series 199
Hambelton, E.	2000	A method for converting Grant mandible wear stages to Payne style wear stages in sheep, cow and pig. In Millard, A (eds.) Archaeological Sciences 1997. Proceedings of the conference held at the University of Durham. BAR International Series 939
Harcourt, R.A.	1974	The dog in prehistoric and early historic Britain. <i>J. Archaeol. Sci.</i> , 1, 151-176

Appendix 8: Environmental Samples

by Rachel Fosberry

Introduction and Methods

Twenty bulk samples of up to 20 litres in volume were taken from several excavated features including pits and ditches.

Ten litres of each sample were processed by tank flotation for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. The flot was collected in a 0.5mm nylon mesh and the residue was washed through a 1mm sieve. Both flot and residue were allowed to air dry. The dried residue was passed through 5mm and 2mm sieves and a magnet was dragged through each resulting fraction prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The flot was examined under a binocular microscope at x16 magnification and the presence of any plant remains or other artefacts are noted on the table of results.

Two monoliths samples were taken and will be assessed independently.

Sample	Context	Cut	Flot contents	Residue contents
Number	Number	Number		
100	100		Sparse charcoal, uncharred seeds	Animal bone, pottery, tile, hammerscale,
101	101		Sparse charcoal, uncharred seeds	Marine molluscs, small bones
103	176	178	Snails only	Marine molluscs
104	221	222	Sparse charcoal, uncharred seeds	Marine molluscs, pottery
105	230	232	Snails only	Marine molluscs, animal bone, fe nail
106	226	225	Snails only	No finds
107	243	242	Snails only	Animal bone
108	245	244	Snails only	Animal bone
109	211	212	Snails only	No finds
110			single legume-no testa, uncharred	Animal bone
	252	253	seeds	
111	250	249	5 wheat grains	Fired clay
112	233	229	Sparse charcoal, uncharred seeds	Animal bone
113			1 wheat fragment, uncharred	pottery
	266	265	seeds	
114	278	279	2 wheat grains and 2 vetch seeds	No finds
115			2 wheat,1 pea cotyledon,	Animal bone
	272	271	Chenopodium sp.	
116			2 wheat,1 pea cotyledon,	Animal bone
	276	275	Chenopodium sp, burnt snail	
117	290	291	1 wheat grain, 1 grass seed	Animal bone
118	260	259	2 wheat grains	Animal bone, fired clay
119			2 wheat,1 pea cotyledon,	Animal bone
	299	298	chenopodium	
120	300	301		No finds

Table of results

Preservation is predominantly by charring although uncharred seeds including elderberry (*Sambucus nigra*) are present in several samples.

Charred plant remains are rare and include wheat (*Triticum* sp.), Fat-hen (*Chenopodium* sp.) and vetches (*Vicia* sp.). Legumes are represented by a pea (*Pisum* sp.) cotyledon and a possible bean (*Vicia faba*).

Other artefacts

Residue volumes are small (between 50ml and 300ml) and finds were scarce, usually singular. Small fragments of marine molluscs are present in four samples and were identified as Mussel (*Mytillus* sp.) and Cockle (*Cerastoderma edule*). Snails are ubiquitous with slight variation between samples.

Conclusions and recommendations

The samples examined from excavation closely resemble those taken from the evaluation in that they were largely unproductive. The flots produced a low abundance of charred material in the form of cereal grains and sparse charcoal fragments suggesting that the samples represent general scatters of burnt debris rather than discrete purposeful deposits. No further work is recommended.

Appendix 9: Analysis of sediments

by Chris Rolfe BSc.

Introduction

This report presents the results of pollen analyses, loss-on-ignition, particle size analysis and Total Phosphate from monolith sediment sample 'BURKFD07 226/227 <121>'. The sediment sample was taken from a section (Section 147) at a site "Kingfisher Drive, Burwell, Cambridgeshire". The three sub-samples for pollen were taken from contexts 226 and 227 respectively. The monolith sediment sample was also sub-sampled at 5cm intervals for the techniques given above. Context 226 is a grey silty clay sediment. Underlying this, context 227 is a mottled grey clay.

Methodology

Pollen analysis

The three samples for pollen analysis were prepared using the standard hydrofluoric acid technique, and counted for pollen using a high-power stereomicroscope.

pH & Electrical Conductivity

The pH & Electrical Conductivity of the sediment was measured using calibrated probes. For each sample, sediment was homogenised with deionised water (in a 1:3 ratio) to form a paste, which was then measured for each parameter in turn. Values for Electrical Conductivity were corrected to take account of this dilution. Similar corrections for pH are not appropriate.

Organic, Calcium Carbonate & Silicate Residue (Loss-on-ignition)

Sub-samples of sediment were placed in weighed crucibles, dried in an oven at 105°C for 6 hours and then re-weighed to give a dry weight. The subsamples were then heated in a muffle furnace for 6 hours at 400°C and then re-weighed to give the loss-on-ignition at 400°C. This loss expressed as a percentage of the original dry weight is taken as a measure of the carbohydrate content of the sediment. The sub-samples were then heated in a muffle furnace for 6 hours at 480°C and then re-weighed to give the loss-onignition at 480°C. The loss between 400°C and 480°C is taken to represent the loss of Carbon content from the sample. The sub-samples were then heated in a muffle furnace for 6 hours at 950°C and then re-weighed to give the loss-on-ignition at 950°C. This loss is taken to represent the mass of carbon dioxide released from calcium carbonate present in the sediment. The mass of carbon dioxide and calcium carbonate, and this figure is the expressed as a percentage of the original dry weight and taken as a measure of the calcium carbonate content of the sediment. The silicate residue is the remaining proportion of the sediment not accounted for by organic matter and calcium carbonate.

Laser Particle Size Analysis

Sub-samples of sediment were treated 4.4% sodium pyrophosphate at 90°C for 3 hours to aid disaggregation prior to analysis using a Malvern Mastersizer 2000 laser particle sizer. Note that this preparation does not remove any part of the sediment, and the particle size data obtained are analyses of 'whole' sediment (containing organic, carbonate and silicate material). The statistics presented as the 'laser particle size summary' are the median particle size (d 0.5) in μ m, and the particle sizes at one and two standard deviations towards the coarse (d 0.84 & d 0.95) and fine (d 0.16 & d 0.05) ends of the particle size data set is presented in Appendices 4.3. Particle size analysis was also undertaken on the samples whereby the carbonate content was removed (see Appendices 4.4).

Phosphate

Sub-samples of sediment for phosphate analysis were extracted from the length of the monolith sediment sample at 5cm intervals. The samples were then digested using aqua regia before being analysed on the Perkin-Elmer inductively coupled plasma – optical emission spectrometer (ICP-OES).

Results

Pollen Analyses

Pollen concentrations varied widely between 11,227 and 13,349 grains per ml. Pollen was counted at x400 with a high power stereomicroscope. For the pollen samples, the concentration was variable with rather poor preservation of the fossil pollen grains (palynomorphs). For the sample taken from context 227 at the top of the section a total pollen count of 31 was obtained after. The pollen concentration and preservation was considerably poor. Counts of 41 and 45 were achieved for context 226 at 5cm and 20cms respectively from the base of the monolith sediment sample.

It should be noted that for statistically reliable data, pollen sums of at least 300 are generally recommended. Therefore great care should be taken in the interpretation of these pollen assessment results.

Context 226

Basal sample taken at 5cm from base of monolith produced a poor pollen signal of 41 grains with a concentration of 11,227 pollen grains per ml. The sample was dominated by grass (34.1%), Asteraceae (34.1%) and other herbs including the thistle family (7.3%). Arboreal taxa are represented by birch (*Betula*) (4.9%) and willow (*Salix*) (2.4%). Also present are the herbs of the heather family. The only spores present were the spores of ferns (9.8%).

The aquatics are present in White water-lily (7.3%), Yellow water-lily (3.6%), Broad-leaf pond weed (3.6%) and Reedmace (2.4%).

The sample from context 226 at 20cm produced a rather poor pollen signal with a main sum of only 45 pollen grains counted, giving a concentration of 13,349 pollen grains per ml. The sample was dominated by herb pollen Asteraceae (28.9%) and grass (26.7%). Arboreal taxa are represented by birch (*Betula*) (13.3%), oak (*Quercus*) (2.2%), hazel (*Corylus*) (11.1%) and juniper (*Juniperus*) (2.2%). Also present are the herb pollen of the goosefoot family (6.7%), thistle family (4.4%) and pink family (2.2%). Fern spores (2.2%) are also present. The aquatics are present in White water-lily (4.4%), Broadleaf pond weed (2.2%) and Bur-reed (2.2%).

Context 227

Context 227, the top sample, provided the poorest pollen signal with a count of 31 pollen grains, giving a concentration of 11,823 pollen grains per ml. The sample was dominated by herb pollen of grass (32.3%), Asteraceae (22.6%), hazel (*Corylus*) (22.6%), birch (*Betula*) (9.7%) and the thistle family (3.2%). Spores of ferns (9.7%) were also present. Aquatic plants are represented by Broad-leaf pond weed (6.5%) and Yellow water-lily (3.2%).

pH and Electrical Conductivity

The pH of sediment in the sequence was remarkably stable and alkaline ranging from 8.30 to 8.59. No clear pattern in pH reading was discernable up the profile. Electrical Conductivity (EC) readings varied from 523 to 929 μ S/cm. The lowest (mesotrophic) values were from the finer silty clay units from the sequence, whilst the highest(eutrophic) values coarser silt part of the sequence.

Organic, Calcium Carbonate & Silicate Residue

Organic content of the sediments ranged from 2.7 to 3.7%. Calcium Carbonate content remained high ranging between 77.2% and 81.2%.

Laser Particle Size Summary

The median (d 0.5) particle size for the sequence ranged from 11.39 μ m (finemedium silt) to 27.55 μ m (medium silt). A small degree of coarsening can be observed at 15cm and 40cm. With particle size analysis of whole sediment, caution must be exercised because apparent coarsening events may be caused by the presence of detrital organic material or shell debris. Analysis with the Calcium carbonate removed shows homogeneous fine-medium silt throughout.

Phosphate

Phosphate values varied throughout the sequence from 777.mg/l to 1198mg/l.

Discussion & Conclusions

The first observation concerns the nature of the sediments itself. The sediment is predominantly carbonate rich clayey silt with silicate minerals. The high phosphate levels are associated with more eutrophic conditions (also higher Electrical Conductivity readings) possibly receiving drainage from the surrounding area.

The sediment presented in contexts 226 and 227 are calcium carbonate rich with a degree of inwash represented by the silicate fraction in the sample.

Particle size analysis gives a median size as silt with the material being calcium carbonate silt deposited in a low energy environment. The d95 values are higher indicating inwash or even shells. The particle size of silicate with the Calcium carbonate removed is similar to the carbonate particle size whereby high d95 values representing inwash.

With poor preservation of pollen grains and low sums obtained there is a great danger of over interpretation. In general the pollen assemblages from each of the contexts analysed are rather similar with grass, Asteraceae, thistle and fern dominated spectra, and arboreal taxa such as hazel and birch. However, differences exist which indicate a changing palaeoenvironment.

At the base of the sample, context 226, with the presence of willow would indicate wetland. There is no indication of agriculture from the pollen analysis performed as no cereal grains were observed. Yellow and White water-lily indicate a water depth of 1 to 2 metres. Broad-leaf pondweed and Yellow water-lily indicate the likely water body to be that of a pond. The presence of reedmace suggests also emergent aquatic vegetation at the water's edge. The presence of Polypodium possibly indicates enough woodland to form a carr. However, the high percentage in the main sum of Asteraceae indicates the pollen signal is badly altered. The pollen signal at 5cm up the sequence indicates a pond/pool/Fen edge/deep water surrounded by vegetation.

Further up the sequence in context 226 the presence of grass and the Aster family remains dominant. The goosefoot family is a weed of arable fields and meadows and with ferns there is support that parts are becoming drier. From the arboreal taxa there is no willow but birch and hazel indicating dryer conditions, potentially managed coppice. Juniper does not tolerate the shade. The aquatic signal suggests an open water signal with Potamogeton (Broadleaf pond weed) being present. Sparganium (Bur-reed) indicates an emergent aquatic. From the pollen signal observed at 20cm the palaeoenvironment could be that of a pool with a fringe of emergent vegetation. With the presence of hazel and oak a scrubby, grassy meadow is suggested. The surrounding area appears to have changed. The presence of the less hardy pollen grains of birch and willow would indicate that post depositional oxidation processes has occurred to a lesser extent. There is some evidence for hazel scrub and heathland. Willow suggests damp woodland nearby. Members of the goosefoot family are abundant, and this plant is typical of pastures and meadows disturbed by cattle, and as a weed of arable fields. The

assemblages for context 226 is not particularly diagnostic and great care should be given that interpretations are being based on one or two grains of a particular type being present.

Context 227 at the top of the sequence provides an arboreal pollen signal with trees and shrubs representing up to 40% of the main sum. Hazel is still present indicating a hazel birch scrub still exists with the likelihood of being managed or coppiced. The presence of Yellow water-lily still indicates water. Based on 31 grains being counted the interpretation is limited. Very little information was obtained regarding herbs or emergent vegetation.

From the analyses performed the environment of deposition could be described as a stable carbonate rich pool. The pool or pond being surround by more and more woodland. There are no disturbed ground indicators present such as Plantago lanceolata. From the limited pollen count the signal is drying from a pool to a hazel scrub.

The difficulty is the environment is atypical with a mixed signal given of a pool/meadow and surrounding trees. There is insufficient data to give an accurate interpretation of the palaeoenvironment. The assessment count presented does not give a clear signal. From the archaeological evidence obtained by CAM ARC the possibility of a medieval age has been suggested. However, if medieval in age then cereal pollen would be expected to be present in the pollen counts

From the limited number of samples analysed and the low pollen counts obtained it is very difficult to give an exact date for the section studied. From the evidence obtained from contexts 226 and 227 it is suggested post-clearance. The pollen data could easily indicate dates anywhere since the late Bronze Age.

Drawing Conventions					
F	Plans				
Limit of Excavation					
Evaluation Trench					
Deposit - Conjectured					
Natural Features					
Sondages/Machine Strip					
Test Pit					
Intrusion/Truncation					
Undercut	Cut				
Illustrated Section	<u> </u>				
Archaeological Deposit					
Archaeological Feature					
Excavated Slot					
Modern					
Cut Number	118				
Se	ctions				
Limit of Excavation -					
Cut -					
Cut-Conjectured -					
Deposit Horizon -					
Deposit Horizon - Conjectured -					
Intrusion/Truncation -					
Top Surface/Top of Natural -					
Break in Section/ Limit of Section Drawing					
Cut Number 118 Ord	nance Datum 18.45m OD				
Deposit Number 117	Inclusions				

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Figure 1: Location of excavation (black) with the development area outlined (red)













Figure 7: Section drawings



Figure 9: Section drawings



Figure 8: Section drawings



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