
Proceedings of the Cambridge Antiquarian Society

(incorporating the Cambs and Hunts Archaeological Society)

Volume XCIX
for 2010

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Recent Publications of the Cambridge Antiquarian Society

Proceedings XCVI, 2007: Price £12.50 for members, £14.50 for non-members

- Phil Weston, Andrew A.S. Newton and Kate Nicholson: *A Late Bronze Age enclosure at Lynton Way, Sawston, Cambridgeshire*
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Proceedings XCVIII, 2009: Price £12.50 for members, £14.50 for non-members

- John Pickles, Peter Gathercole, and Alison Taylor: *Mary Desborough Crafter, 1928–2008*
Leo Webley and Jonathan Hiller: *A fen island in the Neolithic and Bronze Age: excavations at North Fen, Sutton, Cambridgeshire*
Aileen Connor: *A fen island burial: excavation of an Early Bronze Age round barrow at North Fen, Sutton*
Hella Eckardt with Amanda Clarke, Sophie Hay, Stephen Macaulay, Pat Ryan, David Thornley and Jane Timby: *The Bartlow Hills in context*
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Scott Kenney: *A reappraisal of the evidence for the 'northern arm' of the Fleam Dyke at Fen Ditton*
Laura Piper and Andrew Norton: *An excavation at Station Quarry, Steeple Morden, Cambridgeshire*
Duncan Mackay: *Excavations at Scotland Road/Union Lane, Chesterton*
Aileen Connor: *A curious object from Firs Farm, Caxton*
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Christopher Taylor, Christopher Brookes, Evelyn Lord and Sam Lucy: *Reviews*
Chris Jakes: *Recent Accessions to the Cambridgeshire Collection*

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Cambridge Antiquarian Society**

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**Volume XCIX
for 2010**

Editors

David A Barrowclough
Mary Chester-Kadwell

Assistant Editor
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Chris Michaelides BA, PGCE, MCLIP

86 Harvey Goodwin Court,

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Tel: 07884 431012

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Cambridge Antiquarian Society

Report for the Year 2009

Membership: there are now 382 members, 49 Affiliated Societies and 67 subscribing institutions.

Meetings: There were 4 Council meetings and 9 Ordinary meetings, at which the following lectures were given:

Gabriel Moshenska	<i>The School Air Raid Shelter: History, Archaeology and Memory</i>
Prof. Stephen Oakley	<i>How Latin Texts Survived from Antiquity to the Age of Printing</i> (In association with the Society for the Promotion of Roman Studies)
Richard Buckley	<i>A Tale of Two Towns: recent discoveries from Roman and Medieval Leicester</i>
Prof. Ronald Hutton	<i>The History of Prehistory: Megaliths and the Modern Imagination</i>
Dr Catherine Hills	<i>Skeletons in the Garden – Romans and Anglo Saxons at Newnham College</i>
Ben Robinson	<i>Revealing Peterborough – New Explorations in an Ancient Cathedral City</i>
Dr Stephen Alford	<i>Finding Nicholas Berden: the career of an Elizabethan spy</i>
Prof. Simon Keynes	<i>John Mitchell Kemble (1807–57): Apostle, Revolutionary, and Anglo-Saxonist</i>
Richard Mortimer & Alex Pickstone	<i>Further Excavations at the War Ditches, Cherry Hinton, Cambridge</i> (In association with the Prehistoric Society)

In addition the following two conferences were held:

21st November 2009	<i>Recent archaeological work in Cambridgeshire</i>
17th April 2010	<i>Past Relations: different approaches to the dead over time</i>

Excursions: The Programme for 2010 consisted of the following visits:

Chatham Historic Dockyard, Saturday 15 May:

One of the country's foremost naval dockyards for 300 years, Chatham has been in the care of the Historic Dockyard Trust since 1985. As well as three historic vessels – HMS Gannet (1878), HMS Cavalier (1944) and HM Submarine Ocelot (1962) – it has a spectacular Victorian Ropery and a galaxy of other permanent and temporary exhibitions and displays, including 'The Wooden Walls' (a recreation of the dockyard in 1758) and the RNLI Lifeboat Collection. It also has the largest single concentration of listed buildings (military, civil and religious) in the UK.

Cherry Hinton, Saturday 26 June.

A morning was spent exploring the historical and archaeological landscape of Cherry Hinton Hall and its surroundings, under the guidance of Ms Michelle Bullivant. Outwardly Victorian, the park nonetheless has many features that bear witness to former land uses and industrial activity. Also investigated was the Lime Kiln Hill area and the newly-open to the public East Pit.

Spalding, Lincolnshire, Wednesday 14 July.

The highlight of this excursion was a visit to the Spalding Gentlemen's Society, founded in 1710 and one of the oldest learned societies in the country. The Society has the UK's second oldest museum collection, containing many rare items of both local and national interest, and a fine library.

The medieval riverside at Ely, Wednesday 15 September.

The riverside was a centre of activity in the Middle Ages attracting trades dependent on the river, and those requiring water such as brewing. The area was developed after the diversion of the river to its present course, probably in the twelfth century, thereby incorporating Ely into the fenland river network.

This walk, led by Mrs Anne Holton-Krayenbuhl, explored the area between the river and Broad Street, bounded by Waterside to the north, looking at sites of former watercourses, hithes, and buildings. The tour also included two medieval houses in Broad Street.

Moggerhanger Park, Bedfordshire, Wednesday 6 October.

Relatively little-known, perhaps due to its long period of use as a local authority TB sanatorium and then orthopaedic hospital (from 1919 to 1987), Moggerhanger was designed by Sir John Soane for Sir Godfrey Thornton, a director of the Bank of England, and built between 1790 and 1816. Listed Grade 1, it is regarded as perhaps the best complete surviving example of Soane's work, and epitomises many of his architectural ideas. The grounds were laid out by Humphry Repton. Now in the care of a Trust, which stepped in to avert the threatened demolition of the house and construction of a housing estate on the site, this excursion enabled members to see the current state of an ongoing and ambitious programme of restoration.

Cambridge Antiquarian Society Accounts for the Year Ended 31/12/2009

Registered Charity 299211 • Founded 1840

PAYMENTS		2008	2009
	Lectures: Publishing Programme	332.53	310.00
	Expenses	255.44	401.07
	Vol XCVI Delivery	1418.33	
	Proceedings Vol XCVII Publication	6399.28	
	Proceedings Vol XCVII Delivery	911.14	(b)
	Proceedings Vol XCVIII Publication		7692.41
	Proceedings Vol XCVIII Delivery		1083.29
	Conduit	1050.36 (a)	1005.00 (a)
	Conference: March	944.69 (a)	898.35 (b, c)
	: November	437.67 (a)	300.00
	Excursions	2147.09 (a)	285.03 (b)
	Mailings: Delivery Charges	504.65	156.56 (b, c)
	Subscriptions (CBA, Rescue, CRSoc)	102.00	104.00
	Haddon Library: Conservation	100.00	100.00
	Office Expenses, Web Site, Misc	376.17	347.75
	Emolument: Registrar	250.00	250.00
	Publicity		532.65
	Insurance	221.60	241.05
	From capital: new web site	894.83 (b)	1121.25 (h)
	Small Grants Scheme	<u>500.00</u>	<u>100.00</u>
	Sub-Total	16895.78	14928.41
	Purchase of Investments	6000.00	
	Total Payments	<u>22895.78</u>	<u>14928.41</u>
RECEIPTS		2008	2009
	Subscriptions: Members & Societies	7110.00	6908.50
	Tax Reclaimed	720.71	779.65
	C.U. Archaeology Dept.	800.00	800.00
	Proceedings Vol XCVI: Grants	2369.00	
	VolXCVII: Grants	3370.00	
	VolXCVIII: Grants		2090.00
	Conduit	486.96	162.60
	Conference: March	1197.10	1813.00
	: November	386.00	505.00
	Excursions	1924.25	312.00
	Sales of Publications	173.48	135.90
	Royalties, Misc	416.00	208.05
	Investment Income (gross)	997.59	1174.05
	Interest: NSB (gross)	<u>812.02</u>	<u>67.41</u>
	Total Receipts	<u>20763.11</u>	<u>14956.16</u>
	less Payments (excluding Investment of capital adjusted below)	<u>22895.78</u>	<u>14928.41</u>
	Cash Surplus/Deficit (-)	-2132.67	27.75 (d)
	Fixed Interest Treasury Stock:		
	Capital investment	6000.00	
	less excess cost on purchase/re-investment over maturity values	-997.06	-571.32
	Surplus/Deficit (-) Income over Expenditure	<u>2870.27</u>	<u>-543.57</u>
STATEMENT OF ASSETS			
	Cash Funds: Current A/C	2611.26	2571.60
	: Deposit A/C	23265.03	23332.44 (e)
	Treasury Stock at maturity values	<u>18363.84</u>	<u>17792.52</u>
		<u>44240.13</u>	<u>43696.56 (g)</u>
	Accumulated Fund		
	At beginning of year	41369.86	44240.13
	Surplus/Deficit (-) Income over Expenditure for the Year	<u>2870.27</u>	<u>-543.57</u>
	At end of year	<u>44240.13</u>	<u>43696.56</u>
	Planned Future Expenditure		9840.00 (f)

Notes

The presentation of the accounts conforms to guidance provided by the Charity Commission. Comment on some of the entries is given in the following notes:

- a. The cost of mailing details to members has been attributed to the event.
- b. A credit of £894.83 with Mailing Distributor arose in 2008 and was used in 2009.
- c. Adding the attributable postage credit makes the 2009 figures comparable to earlier years.
- d. This figure is influenced by a credit with the mailing distributor (b) and the exceptional expenditure on redesigning the Web site (h); excluding these amounts the surplus from the normal activities of the Society in the year 2009 is £254.17.
- e. In 2005 the Council reviewed the policy for the reserves held by the Society and concluded that the cash funds less liabilities (f) should be maintained in the range £10,000 to £20,000; on 31 December 2009 the reserves were £16,064
- f. Planned expenditure; PCAS Vol XCIX £8000, Ladd's Bequest (g) £840, Small Grants £500 and a grant of £500 to Cambridgeshire Archives towards the cost of purchasing the Fen Drainage Papers; total £9,840.
- g. Includes Ladd's bequest earmarked for events associated with Huntingdon; with interest the sum is now £840.
- h. Exceptional expenditure on the design of a new Web site.

Contents

Note on 'Mary Desborough Cra'ster, 1928–2008' published in <i>PCAS</i> XCVIII (2009), pp. 7-10	6
A Middle Bronze Age Cremation Cemetery on the Western Claylands at Papworth Everard Nicholas Gilmour, Natasha Dodwell and Elizabeth Popescu	7
Further excavation of a late Iron Age settlement at Scotland Farm, Dry Drayton David Ingham	25
Excavations at Castle Street Christopher Evans and Letty Ten Harkel	35
Early Bronze Age, Iron Age and Roman pit deposits at Bluntisham, Cambridgeshire Adrian Burrow and Andrew Mudd	61
Roman, Anglo-Saxon and medieval settlement at Stow Longa and Tilbrook (Huntingdonshire) Rob Atkins	75
Earthwork Survey at Huntingdon Mill Common Michael Fradley	89
Saxon and Medieval activity at Scotts Close, Hilton Thomas Woolhouse	97
A medieval clunch-working site at Fordham Road, Isleham, Cambridgeshire Andrew A. S. Newton	103
Small sites in Cambridgeshire Pip Stone for Archaeological Solutions	113
Medieval enclosures and trackways at Coles Lane, Oakington, Cambridgeshire Andrew B. Powell	121
The medieval network of navigable Fenland waterways I: Crowland Michael Chisholm	125
The Old Rectory Kingston: A Short Note on its Origins Susan Oosthuizen	139
Tea and Delicious Cakes: in conversation with Dr Pamela Jane Smith author of <i>A 'Splendid Idiosyncrasy': Prehistory at Cambridge 1915–50</i> David A. Barrowclough	145
The CAS Collection of Cambridgeshire 'Sketches': Part 2 John Pickles	155
Fieldwork in Cambridgeshire 2009 Sally Thompson, Hazel White, and Elizabeth Shepherd Popescu	161
<i>Index</i>	173
<i>Abbreviations</i>	180
Recent Accessions to the Cambridgeshire Collection Chris Jakes	181

A medieval clunch-working site at Fordham Road, Isleham, Cambridgeshire

Andrew A. S. Newton

Excavation at this site revealed two early, possibly Saxon, features considered to represent small structures or buildings. Later features indicated that the digging and working of clunch, a hard variety of chalk, had been carried out at this site. Dating evidence suggests that this activity continued throughout much of the medieval period and indicates that this is one of the earliest identified incidences of the digging and working of clunch in Isleham. Isleham became known for its clunch industry in the early modern period.

Introduction

Between January and March 2005, Archaeological Solutions Ltd (AS) undertook a programme of archaeological excavation at Fordham Road, Isleham, Cambridgeshire (NGR TL 6438 7390; Fig. 1). The project was commissioned by Hereward Housing Limited in response to a planning condition placed on the residential redevelopment of the site. The primary aim of the excavation was to preserve the archaeological evidence contained within the site by record and to attempt a reconstruction of the history and land use of the site. Full descriptions of all features and contexts, complete specialist reports and further discussion can be found in the interim report (Williamson et al. 2005) and the archive report (Newton 2006).

An archaeological evaluation (Kenney 2004) carried out prior to excavation found a number of postholes, several pits, a ditch and a quarry pit, all of medieval date. Post-medieval levelling was noted at the western edge of the site. The evaluation suggested that the site represented an early medieval croft, similar to later examples known from elsewhere in Isleham.

The site

The site is located at the southern end of the historic core of the village of Isleham. The excavation site occupied the eastern part of the area that was to be developed. It consisted of a sub rectangular area of approximately 1800m² aligned north-west to south-east. The site was bounded by Fordham and Station

Roads but separated from both by a narrow strip of land approximately 1.5m wide. The central part of the site was slightly reduced in size to comply with a 10m exclusion zone surrounding a live Transco Gas sub-station.

The village of Isleham is located at the south-eastern edge of the Cambridgeshire fens, close to the foot of the Lower Cretaceous Chalk ridge, which runs along the south of the county before sweeping northwards into Norfolk (Hall 1996). The chalk ridge rises from the fens to c. 11m OD at the site; the surrounding fenland lies partly on Lower Cretaceous Chalk, and partly on Gault Clay. This solid geology is overlain by the chalky drift and chalk-derived soils of the Wantage 2 association (Soil Survey of England and Wales 1983a & b).

Results

Phase 1: Undated Features and Features of eleventh to twelfth century date

The features assigned to Phase 1 were dateable as eleventh to twelfth century in origin. Also regarded as being of Phase 1 are two undated features whose characteristics suggest that they may significantly predate other features assigned to this phase. These features were assigned to Phase 1 on the basis of their stratigraphic relationships to Phase 2 features; neither contained datable finds.

Undated Phase 1 features

The first of the undated Phase 1 structures (S1330), although severely truncated, was rectangular in plan with a steep sided, flat-based profile, suggesting that it was a Sunken-Featured Building (SFB) or *grubenhaus*. The lower fills of the structure were markedly layered and are interpreted as successive floor and occupation deposits. These were overlain by a final backfill. The feature was cut by a number of later features, indicating that it was constructed prior to the twelfth century.

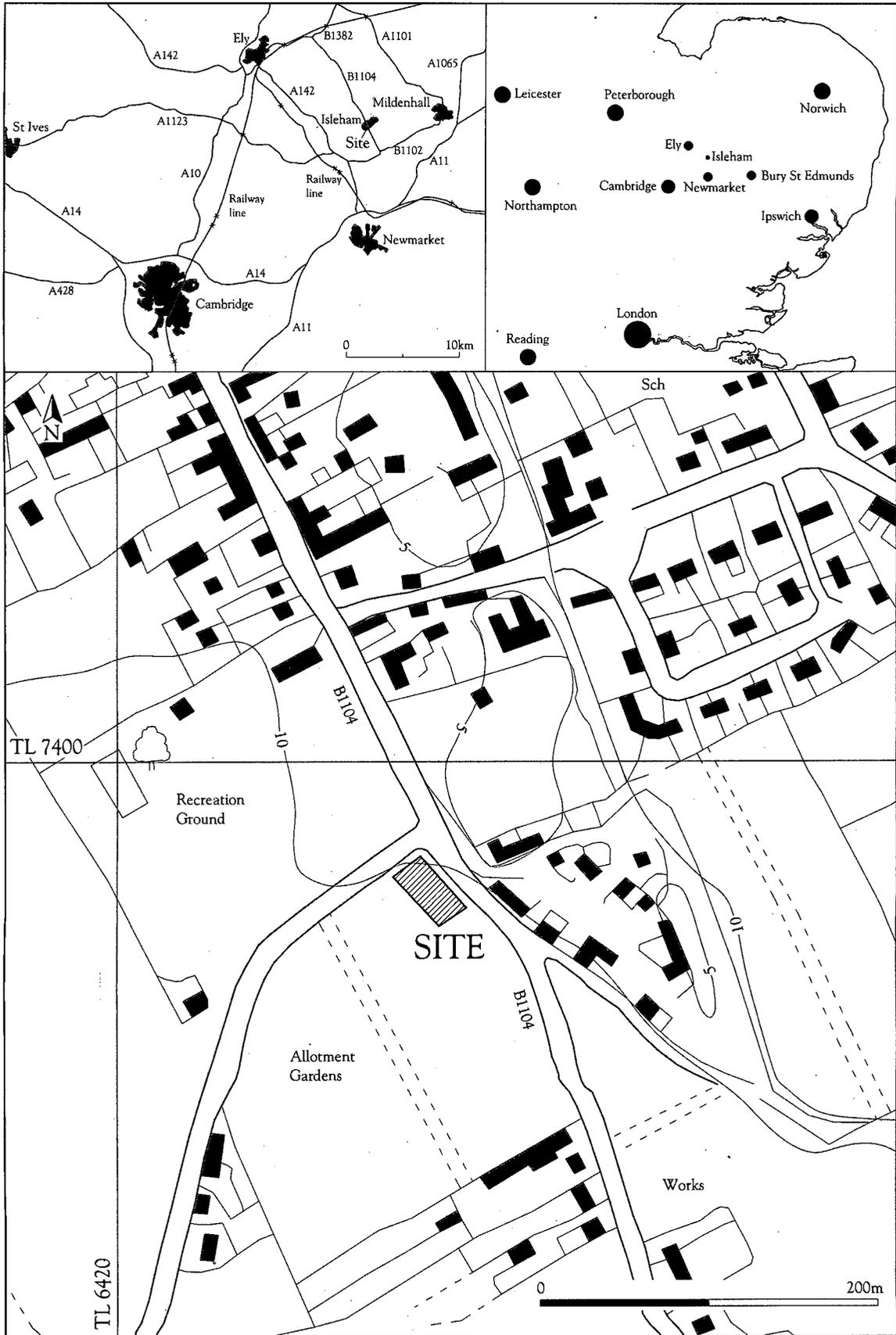


Figure 1. Site location.

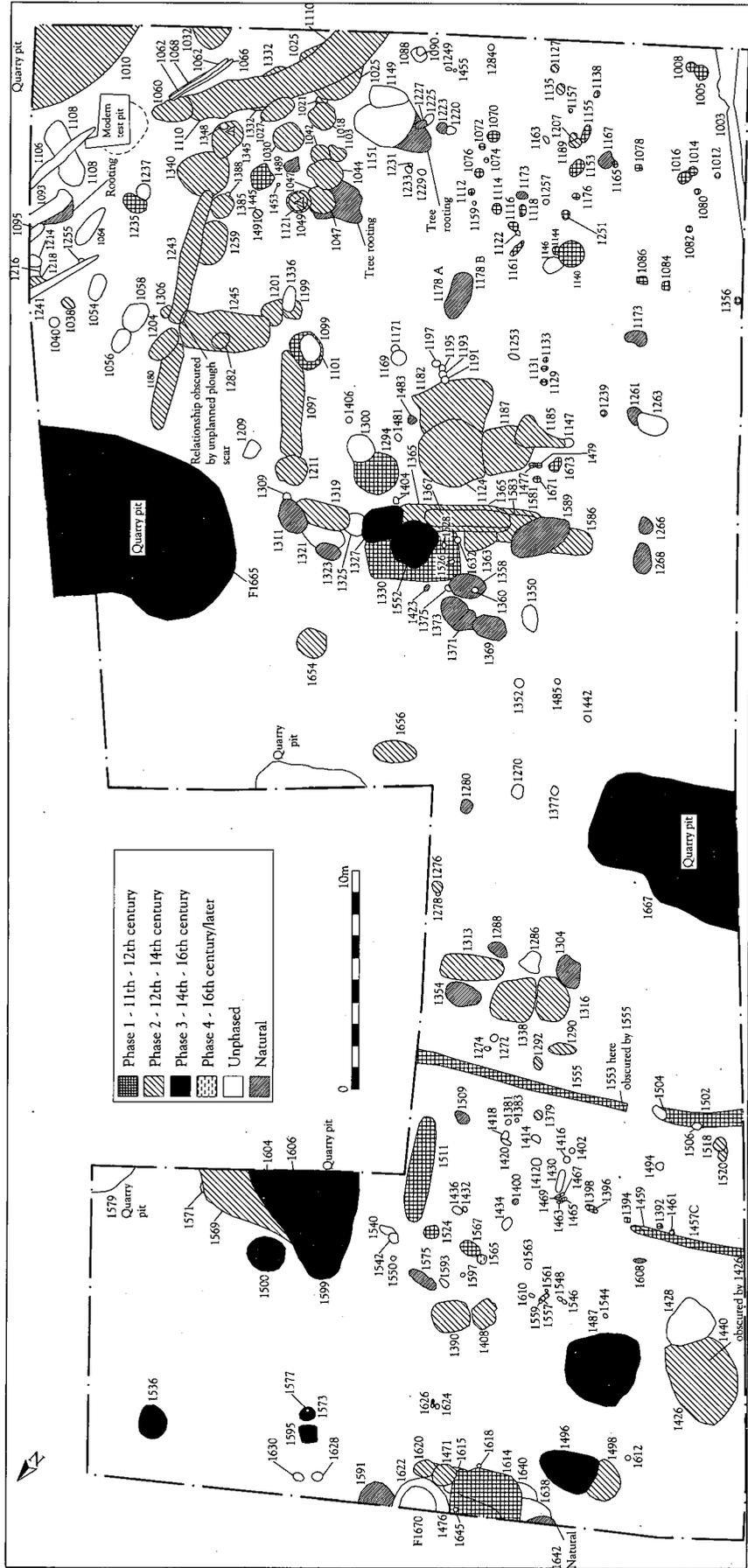


Figure 2. Phase plan.

overlying deposits would appear to post-date the use of S1614 as a sunken-featured building.

Phase 1 clunch extraction and processing

By the start of the sixteenth century the extraction and processing of clunch, a hard variety of chalk, was already established in Isleham. In the 1460s five crofts east of the south end of Up, later Mill, Street already contained stonepits at their street ends and there was a limekiln croft south of Blatherweyk, later known as West, Street (Wareham & Wright 2002, 443). Evidence from this site suggests that the extraction and processing of clunch in Isleham began as early as the eleventh to twelfth centuries.

F1615 (see Fig. 2) is interpreted as a quarry pit for the extraction of the raw material. Although this feature was located close to the limit of excavation and was, as a result, not entirely visible, it was clearly

considerably smaller than most of the later quarry pits. Several smaller pits, F1524, F1567, F1099 and F1235 may also represent small scale clunch extraction activity. F1511 was interpreted as a tank for the soaking of clunch; this interpretation was based on the sub-rectangular plan of the feature and its steep-sided broad-based profile (Fig. 4). The interpretation of similar features assigned to Phase 2 is discussed below.

Water to fill the tank was probably supplied by one of the three Phase 1 wells, F1140, F1294 (both Fig. 4) and F1445, all located at the southern end of the site. The wells had near parallel, vertical or slightly undercut sides, and there was no evidence for lining in any of them; however, none was excavated beyond a depth of 1.2m for reasons of health and safety. They were filled by layered deposits of clayey silt, with deposits of clunch/chalk rubble also present in some

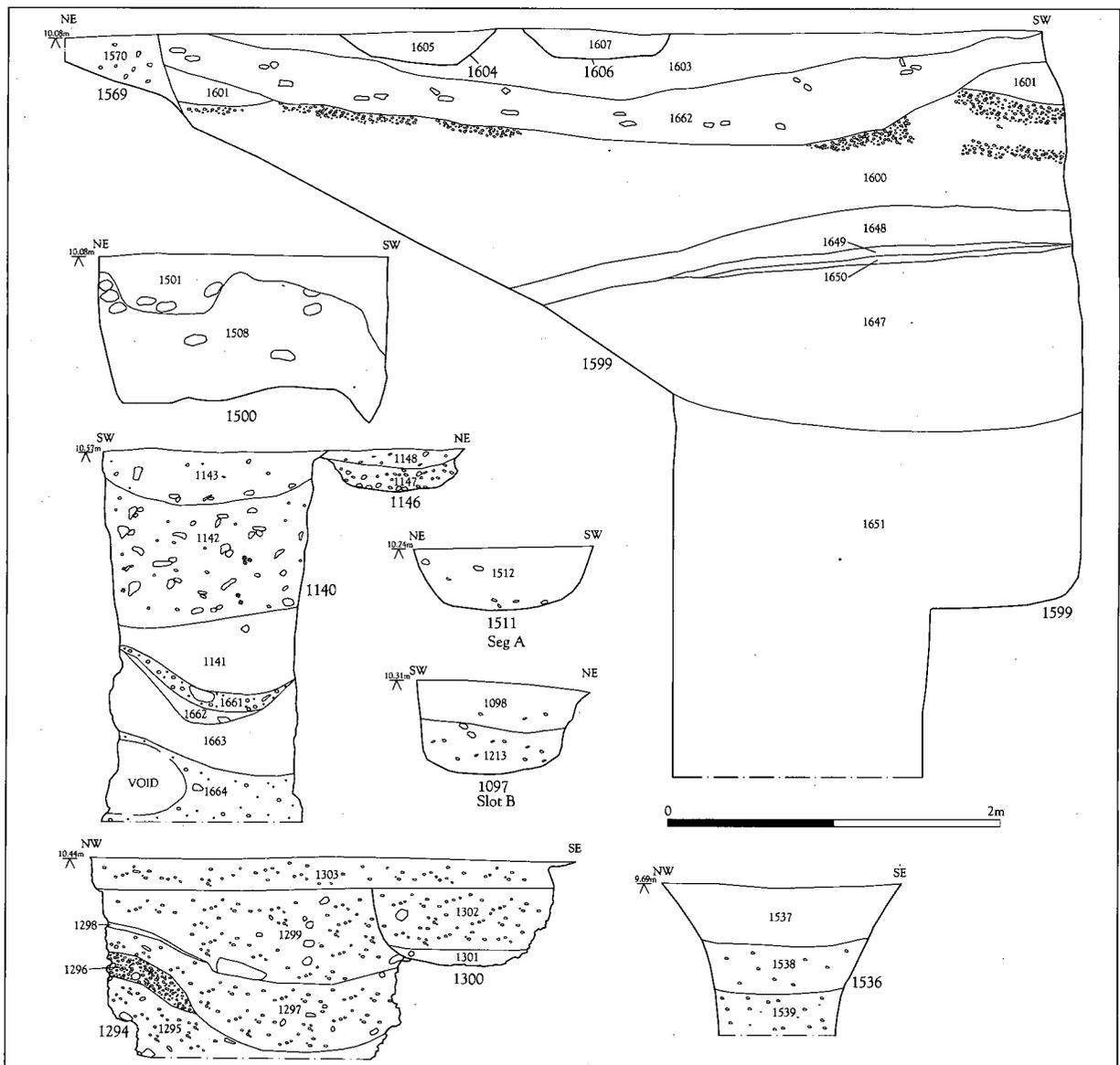


Figure 4. Sections.

of them. Part of a bone flute made from a goose ulna (Fig. 5) was recovered from Well F1140; similar flutes occur on many medieval sites (see Crummy 2006; Leaf 2005).

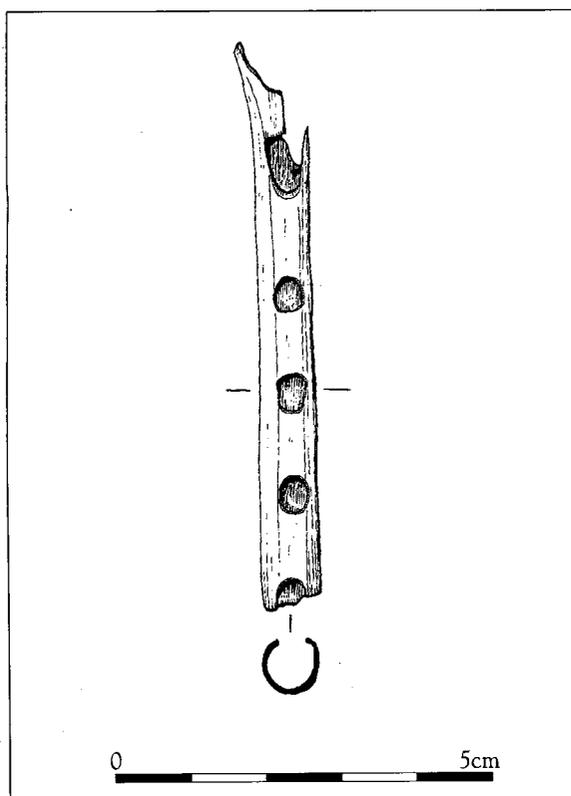


Figure 5. Bone flute.

Boundary features

Two linear gullies (F1502 and F1555) appeared to form an interrupted boundary running approximately east to west across the site (see Fig 2); a further gully (F1457) on the same alignment lay c. 5.6m to their north-west, terminating approximately in line with the terminus of F1502. The line of this third gully was continued eastwards by a line of postholes, two of which cut, and therefore post-dated, the gully's eastern terminus. It is possible that these features represent a boundary deliberately separating these two areas, possibly indicating differential ownership of the two ends of the site.

Phase 2: Clunch extraction and processing in the twelfth to fourteenth centuries

The features assigned to the second phase of activity at the site represented the quarrying and processing of clunch. Datable material recovered from the fills of these features indicates a date range of twelfth to fourteenth century for Phase 2 activity.

Clunch extraction

F1010 (Fig. 2), located in the very eastern corner of the site has been interpreted as a quarry pit from which

clunch was extracted during Phase 2. Its full size is not known, though a machine excavated slot reached a depth of 1.7m without encountering the base of the feature. As was the case with the later quarry pits, relatively few finds were recovered from F1010; this scarcity of finds probably reflects the manner in which the quarry pits were rapidly backfilled with clunch processing waste.

Some of the smaller pits recorded at the site may have initially been dug for the extraction of clunch/chalk and then later used as refuse pits or for other purposes. Features for which this interpretation may be particularly apt are F1385, F1340, and F1332, all of which were relatively large and deep with distinctive vertical sided, flat based profiles. However, the cutting of any feature at the site would have produced chalky material, although this was not necessarily good quality clunch in pieces of architecturally-useful size; poorer quality material could have been used for burning into lime.

Clunch processing tanks and their water supply

Eleven Phase 2 features (F1243, F1180, F1245, F1097 (Fig. 4), F1319, F1327, F1365, F1367, F1581, F1583, F1586 and F1313) were interpreted as tanks for the soaking of clunch, which has to be soaked before it can be successfully sawn into usable blocks. These, like Phase 1 Tank F1511, were identified primarily on the basis of their shapes in plan and profile: Sections of a relatively undisturbed (F1097) and two truncated (F1245 and F1319) tanks are shown in Fig 4. Several tanks had been truncated, making their full extents hard to assess but F1097, which was cut only slightly by two pits, may have been typical in its dimensions of 6.00 x 1.16 x 0.58m

The tanks were not all contemporary with one another. There was intercutting between them, and in some instances one tank was apparently dug as a re-cut of another, in approximately the same location. In addition to pottery, animal bone, CBM and mussel shell, the latter in large amounts from F1097, were recovered from the tanks. It is probable that disused tanks were used opportunistically to dump domestic waste. Chalk/clunch found in the fills of the tanks may represent the dumping of waste from clunch processing or may be the remaining debris from the tanks' last use. These features were mostly clustered at the southern end of the site; F1313 was located away from the other tank features assigned to this phase, towards the northern end of the site.

A constant supply of water would have been required for the tanks. Several features recorded at the site have been interpreted as wells, but only one of these, F1124, has been dated to Phase 2 of activity. The feature was located next to large pits in the north-west of the enclosed area formed by the clunch processing tanks. This location makes it likely that the well was ideally positioned to supply the majority of the Phase 2 tanks.

The enclosed area

The configuration of the Phase 2 clunch soaking

tanks (except for F1313) suggests that they formed the north-east and north-west sides of an enclosure at the south eastern end of the site. The south-east side of this enclosure was formed by ditch F1110.

It is possible that Phase 1 Structure S1029 was still standing when the enclosure was constructed around it. Certain pits within the enclosure, to the east of Structure S1029, contained finds assemblages consistent with the deposition of domestic refuse (c.f. Phillips 2006). It seems unlikely that there was a solely domestic structure in this location; it is more likely that the building was used by the people working at the site, perhaps for administration, possibly for temporary occupation, and almost certainly for the preparation and/or consumption of meals, but that no one lived in it on a permanent basis.

Phase 3: Continuation of clunch-working in the 14th to 16th centuries

Quarry Pits

Three large Phase 3 quarry pits (F1599, F1665 and F1667) were identified around the perimeter of the site. Two further, undated, quarry pits may have been contemporary with these. Because the Phase 3 quarry pits extended beyond the excavated area, their full extents were not apparent, but all were conspicuously large in plan (up to 8.5 x 7.5m). The large size of these features was matched by their depth; F1599 was found by machine excavation to be more than 4.5m deep (Fig. 4).

Most of the quarry pits contained multiple layered fills, many of which comprised large amounts of chalk/clunch rubble. This probably represents waste material from the clunch processing carried out at the site deliberately used to back fill the quarry pits, possibly when they were abandoned having become too large for safe quarrying. Some quarry pit fills, such as L1648 in Pit F1599, may represent episodes of natural silting. Few finds were recovered from the quarry pits, although surprisingly large pottery assemblages were recovered, without excavation, from the upper slump fills of F1665 and F1667.

Wells

Four of the features assigned to Phase 3 (F1536 (Fig. 4), F1500 (Fig. 4), F1487 and F1552) were considered to be wells. These features were circular or sub-circular in plan but, like the quarry pits, were too deep to safely excavate in full. Despite the presence of more wells and more quarry pits in Phase 3 than in any of the preceding phases, possibly suggesting that more clunch was being extracted and processed at the site, there are no Phase 3 features representing clunch processing tanks. This may represent a shift away from soaking clunch in features cut into the ground, possibly to the use of wooden vats or similar objects for this stage of the process. An alternative explanation may be that Phase 3 clunch soaking tanks were present at the site but exist outside of the limits of the excavated area.

Discussion

The development of the Fordham Road clunch working site
The dated features assigned to Phases 1, 2 and 3 attest a site where the quarrying and processing of clunch was carried out. The picture of events represented by these features appears to demonstrate the development of the site from apparent small scale industrial activity to a seemingly more complex operation. The dating and stratigraphic evidence indicates that activity was carried out during a period from the eleventh to sixteenth century. The site represents a significant medieval precursor to the later clunch extraction and lime-burning industries for which Isleham became known (Williamson et al. 2005, 62). The size of the six large quarry pits demonstrates that during the lifespan of the site, a considerable amount of clunch was extracted. It appears that clunch extraction started at the site with the excavation of a smaller quarry pit during Phase 1, before techniques, or market forces, allowed, or demanded, extraction on a larger scale in later phases. Phase 3 appears to represent the peak of clunch extraction at this site.

Clunch is easily workable with a large-toothed, two-handled saw when it is wet but it hardens as it dries. After extraction, the clunch was moved to the tanks for soaking. The processing tanks would have required constant supplies of water, presumably supplied by the six wells identified at the site. Only one Phase 1 tank has been identified, supporting the notion that clunch processing was a small scale industry at this time. The water supply for this tank may have come from one of the three Phase 1 wells located at the opposite end of the site. This would seem to be a problematic arrangement due to the distance water would have had to have been carried. It is, however, possible that further wells of a Phase 1 date exist beyond the limits of the excavated area. The logistics of water supply appear to have been arranged more effectively during Phase 2. All but one of the clunch soaking tanks dated to this period are clustered at the southern end of the site, with the single Phase 2 well located close-by. Water may have drained easily from the processing tanks as they were dug into the porous chalk geology of the site. It is possible that they were lined with leather or tight wickerwork to counter this, although no signs of any lining were encountered during excavation. There are no clunch soaking tanks dated to Phase 3, despite an apparent increase in the quantity of clunch being extracted. This may suggest that the excavated tanks were replaced with wooden vats or similar containers.

Several of the Phase 2 clunch processing tanks form two sides of an enclosure that contained the Phase 1 post-built building, S1029. There is evidence to suggest that this building was still in use when the tanks forming the enclosure were dug. Muir (2004, 216) states that at old quarry sites a search should be made for an administrative area, where stone was stacked prior to removal; it seems possible that this was one of the functions of S1029.

The Clunch quarrying industry in the medieval period

The only industries that developed to any magnitude during the medieval period in England were the primary crafts of cloth-making and building (Holmes 1974, 37). By extension, developments in building would have created pressure on the quarrying industries of medieval England to improve techniques and output. Any small medieval community that had access to a supply of passable building stone would have a local quarry. The stone could be of low quality but would be exploited nonetheless (Muir 2004, 216). However, French stone, perhaps most notably from Caen, originally imported for Norman building projects, continued to be imported until the late 1440s despite the development of the English quarrying industry (Parsons 1990, 9).

The Victoria County History indicates that clunch quarrying was carried out in Isleham from the medieval period onwards stating that "in the 1460s five crofts east of the south end of Up, later Mill, Street... already contained stonepits at their street ends" (Wareham & Wright 2002, 443). This strongly suggests that the Fordham Road site, with an earliest date of *c.* eleventh century, may represent one of the earlier clunch extraction sites in Isleham. Clunch was already in common use, mainly in the areas close to its sources, at around the same time quarrying appears to have been started at the Fordham Road site (Harris 1990).

Isleham, along with Cherry Hinton, Reach and Burwell, formed one of two main groups of clunch quarries in Cambridgeshire (Purcell 1967, 26). The best clunch for use as a building material is considered to be that from the Burwell clunch beds (Purcell 1967, 25). Nearly all of Cambridge's pre-1500 stone buildings were of clunch (Clifton Taylor 1972, 63). Clunch was also used in the building of Ely Cathedral (Darby 1977, 43) and Dunstable Priory in Bedfordshire, built in 1132 (Harris 1990). The effectiveness of clunch as a building material is compromised as it erodes comparatively quickly. Many of the medieval clunch-built buildings in Cambridge eventually had to be re-faced. Christ's College, built of alternating courses of brick and clunch in the sixteenth century, eroded so badly that its appearance reportedly deterred people from entering their sons at the college (Clifton Taylor 1972, 63). However, due to its softness clunch can be easily carved; it lends itself well to sculpture and there are several examples of its use for internal decorative work. A number of the older Cambridge colleges have sixteenth and seventeenth century fireplaces carved from clunch but some of the finest examples can be seen in the fourteenth century Lady Chapel and the Chantry chapels of Bishops Alcock and West in Ely Cathedral as well as in the churches of Burwell and Isleham (Purcell 1967, 28).

Isleham's clunch industries: their role in the settlement's economy

Although Harris (1990) states that clunch was used commonly in the twelfth century in areas close to its sources, an eleventh century date for the start of

clunch extraction activity at Fordham Road may indicate that it was one of the earlier sites of industrial extraction of the material. This may be why the extraction techniques displayed at the Fordham Road site appear to be somewhat primitive in comparison to those used later at the clunch quarries at Totternhoe in Bedfordshire, which produced stone similar to that from Burwell, where a system of adits was cut in to the rock face (Roberts 1974). The chalk and flint mines of Norwich started initially in the eleventh or twelfth century based on an opencast system of stone extraction but eventually methods changed and tunnelling into the strata became the preferred approach. That clunch extraction at Fordham Road did not follow this pattern of development may have more to do with the positioning of the clunch deposits in relation to the surface but it may also indicate that clunch extraction at Fordham Road remained a relatively small-scale activity throughout the duration of the site's use for this purpose.

Clunch extraction at Fordham Road may have remained a comparatively small scale endeavour due to economic factors; Isleham was competing with other fen-edge settlements all with similar resources and access to the fenland waterways that made rising above the others on an economic and financial basis difficult (Oosthuizen 1993). Additionally, the main markets for clunch, the big towns and regional centres, where major building works were carried out, all had other sources of the material much closer than Isleham, suggesting that the output from Fordham Road was only sold on a particularly localised market.

The Medieval manorial land holding system suggests that any industrial activity was probably controlled by the lords of the manor, which in the case of Isleham may have, at varying times, been a lay individual or one of the religious establishments that held land in the village. It is possible that manorial control took the form of issuing clunch working crofts to tenants; in Reach, where Ely Priory owned land, priory tenants were, from the 1420s, given leave to dig clunch in crofts located close to limekilns rented out by the priory (Wareham & Wright 2002, 226). Such a state of affairs at the Fordham Road site is suggested by the presence of the possible Phase 1 boundary features.

The founding of Isleham Priory in the early twelfth century coincides with the start of Phase 2 activity at the site and a shift from what appears to be quite small scale activity to what appears to be a more efficiently organised and probably larger scale operation. This raises the possibility that clunch was extracted from Fordham Road for the construction of the priory buildings. The only surviving part of the priory, Isleham Chapel, is constructed of clunch set in a herringbone pattern (Wareham & Wright 2002, 447) and it seems reasonable to suggest that other priory buildings would have been of similar construction. It is therefore extremely possible that the already-existing clunch working site at Fordham Road was identified as a source of materials for the new priory

and this provided the financial impetus that allowed it to develop from the 12th century onwards. How the quarry remained operating, and indeed continued to develop, after the priory moved to Linton in the early thirteenth century is difficult to identify. It may have continued to supply stone for the repair of existing priory buildings or for other local building projects, but its distance from centres such as Ely and Cambridge, and the proximity of other clunch producing settlements to these places, probably restricted the use of Isleham clunch in these towns. There was, however, evidently enough demand to keep the Fordham Road site producing clunch until the end of the medieval period and the beginning of the post-medieval period when other clunch producing sites in Isleham came to the fore.

In conclusion

The main research value of the site lies in the information that it provides regarding the development of medieval Isleham and of the medieval clunch industry in this part of Cambridgeshire. The role of the clunch-working site at Fordham Road in the local economy does not appear to have been one of monumental importance but the site adds much to the understanding of the character of medieval Isleham. Its presence suggests that clunch-working was established in the settlement possibly significantly earlier than previously considered. The lower end of the date range established for Phase 2 features coincides with some of the earliest dates mentioned for the use of clunch in the East Anglia region. This suggests that there was a local market, at least, for clunch quarried in Isleham at this time. Given the ecclesiastical presence in Isleham throughout the medieval period, it seems likely that there must have been a connection between the clunch-working site at Fordham Road and the estate and buildings of the Church.

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The excavation was directed by Iain Williamson and managed by Jon Murray, both on behalf of AS.

Findings were co-ordinated by Claire Wallace.

Author: Andrew A. S. Newton, Archaeological Solutions Ltd, 98-100 Fore St, Hertford, SG14 1AB

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Contents

Note on 'Mary Desborough Cra'ster, 1928–2008' published in <i>PCAS</i> XCVIII (2009)	6
A Middle Bronze Age Cremation Cemetery on the Western Claylands at Papworth Everard Nicholas Gilmour, Natasha Dodwell and Elizabeth Popescu	7
Further excavation of a late Iron Age settlement at Scotland Farm, Dry Drayton David Ingham	25
Excavations at Castle Street Christopher Evans and Letty Ten Harkel	35
Early Bronze Age, Iron Age and Roman pit deposits at Bluntisham, Cambridgeshire Adrian Burrow and Andrew Mudd	61
Roman, Anglo-Saxon and medieval settlement at Stow Longa and Tilbrook (Huntingdonshire) Rob Atkins	75
Earthwork Survey at Huntingdon Mill Common Michael Fradley	89
Saxon and Medieval activity at Scotts Close, Hilton Thomas Woolhouse	97
A medieval clunch-working site at Fordham Road, Isleham, Cambridgeshire Andrew A. S. Newton	103
Small sites in Cambridgeshire Pip Stone for Archaeological Solutions	113
Medieval enclosures and trackways at Coles Lane, Oakington, Cambridgeshire Andrew B. Powell	121
The medieval network of navigable Fenland waterways I: Crowland Michael Chisholm	125
The Old Rectory Kingston: A Short Note on its Origins Susan Oosthuizen	139
Tea and Delicious Cakes: in conversation with Dr Pamela Jane Smith author of <i>A 'Splendid Idiosyncrasy': Prehistory at Cambridge 1915–50</i> David A. Barrowclough	145
The CAS Collection of Cambridgeshire 'Sketches': Part 2 John Pickles	155
Fieldwork in Cambridgeshire 2009 Sally Thompson, Hazel White, and Elizabeth Shepherd Popescu	161
<i>Index</i>	173
<i>Abbreviations</i>	180
Recent Accessions to the Cambridgeshire Collection Chris Jakes	181