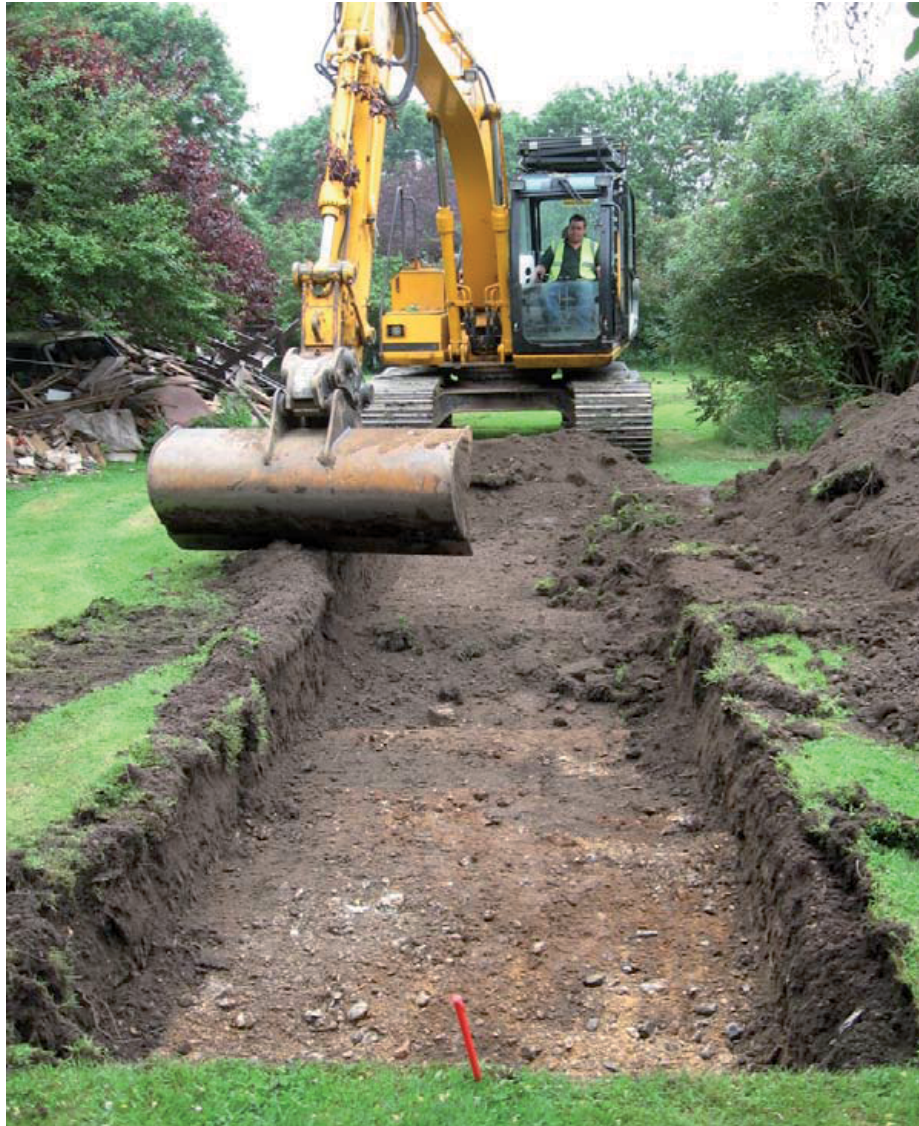


The Red Lion, Whittlesford Bridge, Cambridgeshire

An Archaeological Evaluation



Jacqui Hutton

CAMBRIDGE ARCHAEOLOGICAL UNIT
UNIVERSITY OF CAMBRIDGE



The Red Lion, Whittlesford Bridge, Cambridgeshire Archaeological Evaluation

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Introduction

An archaeological evaluation was undertaken within the grounds of the Red Lion Public House, Whittlesford Bridge, Cambridgeshire, (NGR TL 4848 4725), from the 2nd June to 9th June 2008 in advance of a proposed development of a hotel (Figure 1). The position and orientation of the trenches was determined by the proposed development and the location of trees, services and garden features. The evaluation revealed evidence for Late Mesolithic/earlier Neolithic activity, in the form of two tree throws and worked flint, potential medieval activity in the form of a pit, and a linear and posthole of uncertain date. A wall related to mid 19th century outbuildings was also recorded. The land to the south of the chapel and public house was truncated and disturbed due to the construction and subsequent demolition of buildings during the mid 20th century.

Topography, Geology and Archaeological Background

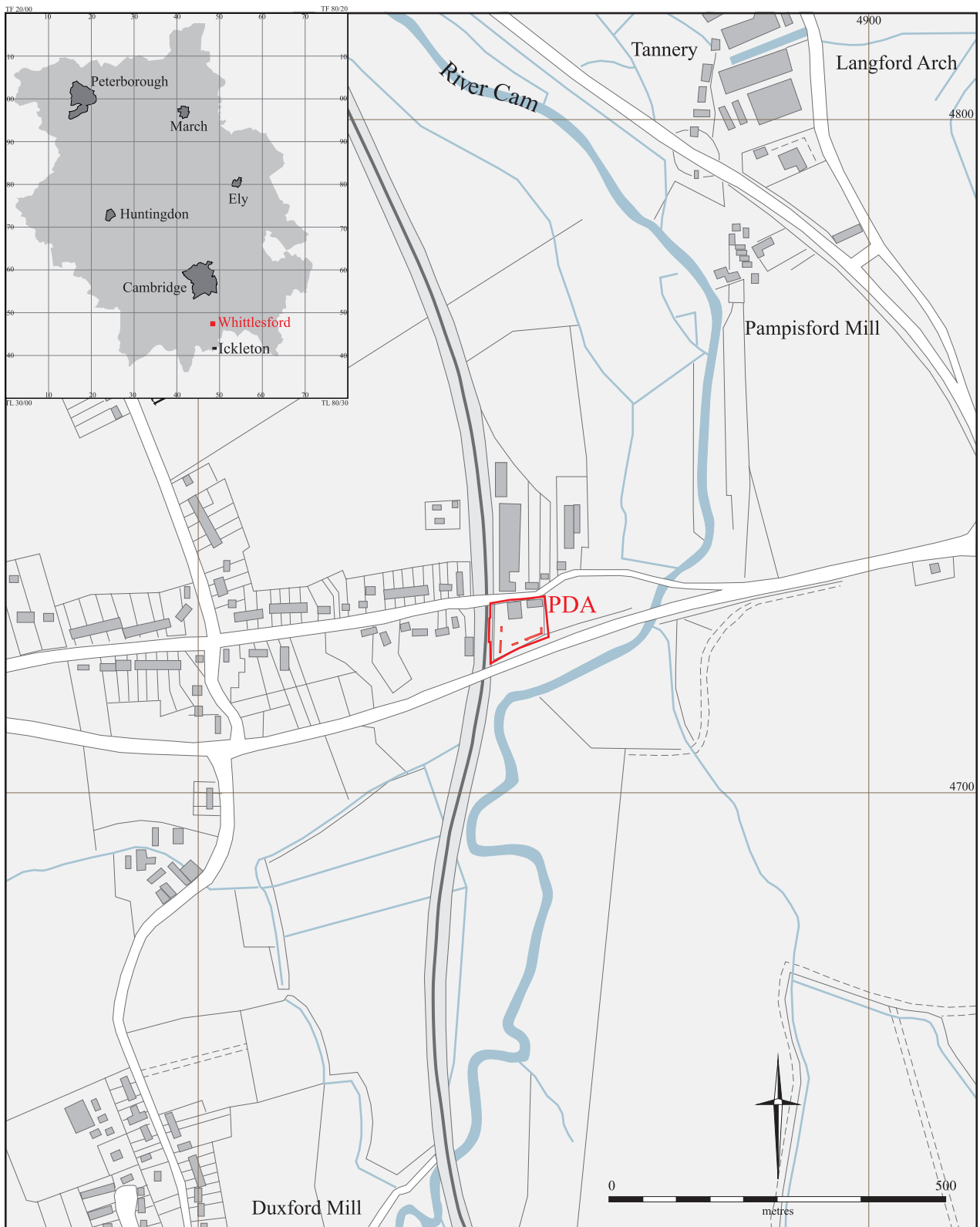
The Proposed Development Area (PDA) is situated on first terrace river deposits overlying Holwell Formation Chalk. The area is characterised by the River Cam (the PDA at between c.25-26m OD lies approximately 200m north of the Cam) with the area sloping down towards the river. The PDA is bordered by a railway line to the west, the A505 to the south, and by houses and commercial premises to the north.

Abundant archaeology is known both within the PDA and surrounding landscape. The archaeological background of the site's environs was fully presented in the Archaeological Desk Based Assessment and therefore will only be summarised here, (Anderson 2008). Within the immediate vicinity there is one Scheduled Ancient Monument and three listed buildings which comprise of a 13th century chapel hospital (SAM 24432), a 16th century coaching inn, now the Red Lion Pub, (Listed Building No. 52912) and a Dovecot (Listed Building No. 52913). Cartographic evidence also suggests a complex of outbuildings located to the south of the inn and chapel during the 19th century. More recently, monuments related to World War Two defensive structures were located in the surrounding area, including an air raid shelter within the PDA itself.

Within the wider landscape, prehistoric activity ranging from the Mesolithic period through to Roman and Saxon occupation has been recorded, ranging from flint artefact scatters, inhumations and settlement features, (McFadyen 1999a & 1999b, Mackay 2007, Anderson 2008).

Methodology

Five 2m wide evaluation trenches of varying lengths ranging from 9m to 27m were machined; totalling 70m. The area was stripped to an archaeological level with a 360° tracked excavator with a toothless ditching bucket under careful supervision of an experienced archaeologist. The unit modified version of the MoLAS recording system was used; features were planned at 1:50, with sections drawn at 1:10. Small pits and postholes were half sectioned, whilst linear features were sampled at



Based on the Ordnance Survey 1:2500 map
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Figure 1. Site location.

appropriate intervals. Archaeological features were assigned a unique number (e.g. **F.1**; bolded upon introduction within the text) and each stratigraphically distinct episode (e.g. a cut, a fill) was recorded with a unique context number (e.g. [001]). A 1.00m sample of subsoil in Trench 3 was excavated in five 10cm spits to record artefact density.

All work was carried out with strict accordance with statutory Health and Safety legislation and with the recommendations of SCAUM. Safety regulations pertaining to wearing of Personal Protective Equipment (PPE) were also followed. The site was surveyed into the Ordnance Survey Grid and Ordnance Datum by means of a RTK GPS unit.

Excavation Results

Trench No.	Position in trench	Length	Orientation	Depth (max)	Depth of topsoil and/or debris	Depth of subsoil
1a	north	9.00m	north-south	0.56m	0.24m	0.26m
1a	centre	9.00m	north-south	0.42m	0.30m	0.12m
1a	south	9.00m	north-south	0.56m	0.26m	0.29m
1b	east	27.00m	northeast-southwest	0.56m	0.26m	0.29m
1b	east centre (at 12.00m)	27.00m	northeast-southwest	0.36m	0.31m	none
1b	west centre (at 20.00m)	27.00m	northeast-southwest	0.31m	0.31m	none
1b	west	27.00m	northeast-southwest	0.50m	0.50m	none
2	east	9.00m	northeast-southwest	0.44m	0.44m	none
2	centre	9.00m	northeast-southwest	0.72m	0.55m	0.17m
2	west	9.00m	northeast-southwest	0.71m	0.46m	0.25m
3	north	18.00m	north-south	0.92m	0.20m	0.70m
3	centre	18.00m	north-south	0.89m	0.20m	0.62m
3	south	18.00m	north-south	0.90m	0.20m	0.63m
4	north	7.00m	north-south	0.60m	0.40m	0.20m
4	centre	7.00m	north-south	0.57m	0.37m	0.20m
4	south	7.00m	north-south	0.65m	0.15m	0.50m

Table 1. Trench dimensions and alignments

Two Trenches (3 and 4) were located towards the west of the PDA on the highest point at 26.71m OD. The adjoining Trenches 1a and 1b were on the lowest point to the south of the chapel, at 24.54m OD, whilst Trench 2 was placed immediately south of the air raid shelter on the sloping ground between the two levels (25.20m OD) (Figure 2).

Topsoil and subsoil was found throughout the western part of the PDA. The subsoil in Trench 3 was approximately 0.50m in depth with underlying preserved archaeological features. The subsoil in Trench 4 was slightly shallower, with features partly cut through the layer. The topsoil consisted of friable dark brown black loam and the subsoil was firm mid brown orange sandy silt with flint inclusions (from the natural matrix).

The area towards the east was very disturbed by the construction and demolition of structures and activities during the mid 20th century, with natural topsoil and subsoil truncated to reveal the gravel sub-natural.

Trench 1a and 1b

Trenches 1a and 1b were positioned on the lowest area in the east of the PDA. Trench 1a (aligned north-south) was located between existing trees and a pagoda, with the southern end joining onto the eastern end of Trench 1b (aligned northeast-southwest). Some root systems were evident with frequent demolition material throughout the overlying topsoil. There was no evidence of subsoil in this area.

On the east facing section of Trench 1a, a short segment of wall, approximately 1.50m in length and consisting of two courses of bricks, was placed directly on top of a linear, (F.8), parallel with the edge of the trench. This linear probably represents the foundation trench of an outer wall relating to buildings that were present on the site during the mid 19th century, (Anderson 2008).

Beneath this foundation trench, an earlier ditch on the same alignment produced no dateable artefacts and consisted of a very compacted sandy fill. The ditch was truncated by the construction of the wall directly on top of it.

F.7 – Ditch. Fill [014]; compact pale brown grey sandy silt with moderate flint inclusions (from natural matrix) with occasional to moderate flecks of chalk and rare flecks of charcoal. Cut [015]; moderately sloping concave sides with concave base. Maximum width 0.68m, maximum depth 0.16m.

F.8 – Wall and foundation trench. Masonry [016]; 2 courses of English Bond with handmade bricks (23cm x 6cm x 11.5cm) with white/cream crumbly mortar. Fill [017]; firm to friable brown orange sandy silt with moderate flint inclusions (from natural matrix), and occasional fragments of brick and mortar. Cut [018]; moderately sloping sides, more steep on east side with flat/uneven base. Maximum width 1.35m, maximum depth c. 0.49m.

The wall exposed in the section of Trench 1a continued into the eastern end of Trench 1b. However, only a short section was revealed in Trench 1b, with no evidence of a termination point or corner, suggesting that the remainder of the wall was demolished through to the foundations. The probable demolition of the wall was supported by the building debris found throughout the disturbed overlying topsoil.

Towards the western part of Trench 1b, demolition debris and domestic rubbish was encountered along with pipes and drains leading into a drainage well. The domestic

debris consisted of glass, pottery and metalwork (assessed during the excavation) dated to the mid 20th century, which corresponds with the demolition of the buildings.

Trench 2

The position of Trench 2 (aligned northeast-southwest) was placed to examine the difference in height between the east and west of the PDA. The eastern part of the trench, (24.74m OD), contained debris and artefacts similar in date to those found in Trench 1b. Towards the western end there was less truncation, (25.20m OD), suggesting the limit of the 20th century disturbance. Three features were recorded that contained a modern domestic assemblage, including the burial of a probable canine.

F.9 – Gully. Fill [019]; moderately compact dark brown grey sandy silt with frequent small to large flint gravel inclusions. Cut [020]; very shallow truncated feature with concave base. Maximum width 0.37, maximum depth 0.10m.

F.10 – Quarry pit. Fill [021]; moderately compact mid orange brown sandy silt with frequent small and large sub-angular flints (including some nodules), and occasional charcoal flecks. Cut [022]; moderately steep concave sides and flat base. Maximum width 1.80m, maximum depth 0.30m.

F.11 – Ditch. Fill [023]; moderately compact mottled light brown yellow silty clay with mid orange grey brown sandy silt and occasional small sub-angular gravel, also included an articulated animal skeleton (possibly small dog). Fill [024]; moderately compact orange grey brown sandy silt with moderate small and medium sub-angular flint gravel inclusions (from natural matrix). Cut [025]; steep near vertical straight sides with sharp break of slope and flat base. Maximum width 0.60m, maximum depth 0.45m.

Trench 3

Trench 3 was positioned on the highest point of the PDA. A subsoil layer was beneath the topsoil (approximately 0.50m in depth), which sealed three underlying features. Two tree throws (F.2 and F.4) yielded Late Mesolithic flint (see flint report below) and a mixture of nutshell and roots/tubers/stems of wild plants that is characteristic of mesolithic to neolithic archaeology (see environmental report below). The charred plant remains, combined with the worked and burnt flint and burnt clay indicates the remains of occupation.

A ditch was also exposed in Trench 3, F.3, which contained residual Late Mesolithic/earlier Neolithic flint. However, the environmental remains recovered from the feature include four burnt cereal grains, of which one is free-threshing wheat, suggesting that the ditch is potentially medieval (see environmental report below). It was not certain whether this linear relates to an individual boundary or a system that was part of a wider landscape of agricultural activity.

The subsoil was sampled in 10 cm spits to record the density of flint artefacts. 28 flints were recovered from the subsoil, including material that can be dated broadly to the Late Mesolithic/earlier Neolithic and is technological compatible with the flints recovered from tree throw F. 2. However, a couple of potentially later flints, some bone, shell and pottery were also recovered from the subsoil indicating that the material within the layer was chronologically mixed. The artefacts recovered from the subsoil pits are listed by type in Table 2.

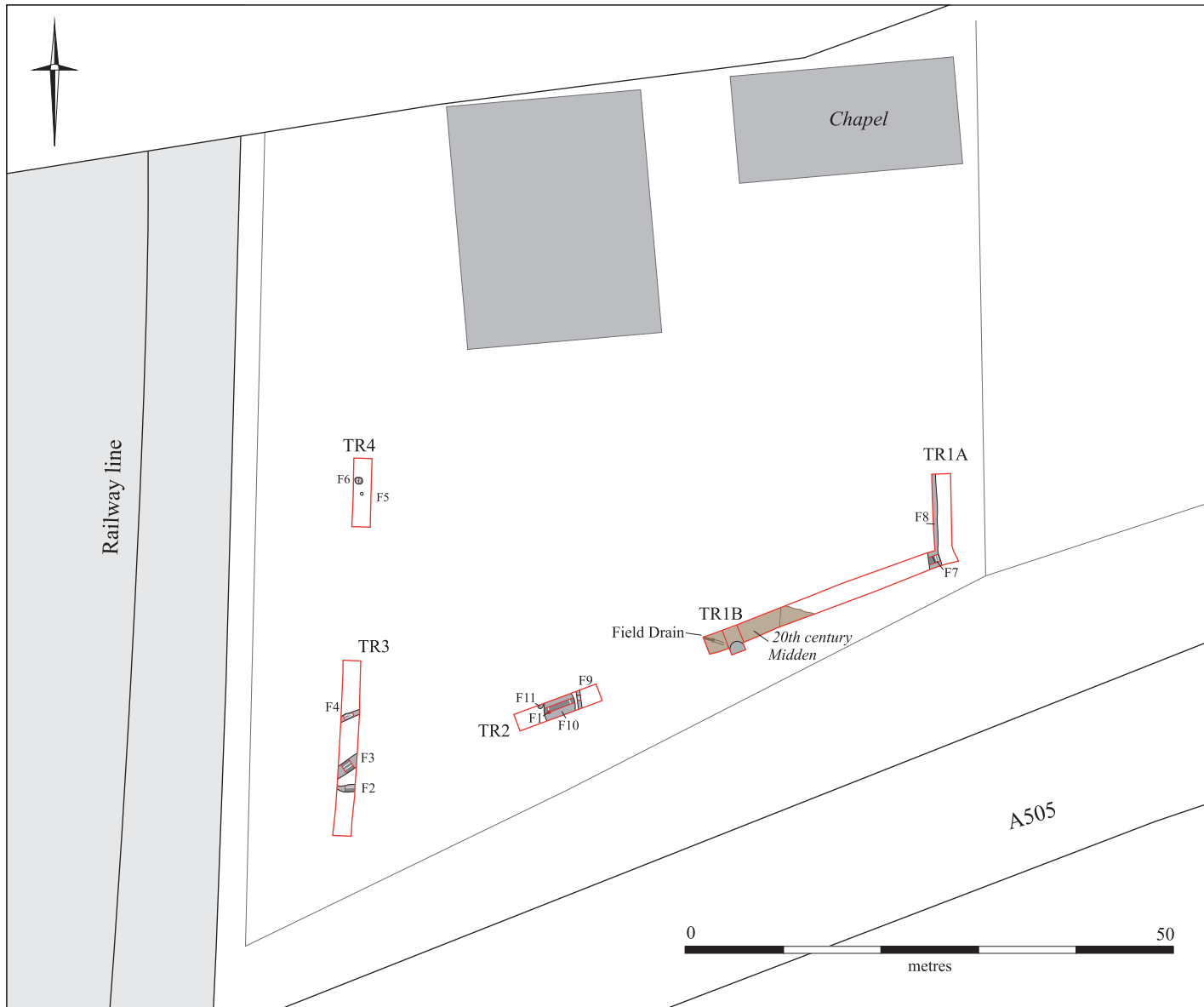


Figure 2. Excavation Results

Spits in cm	No. of flint	Other
A 0-10	5	2 pottery, shell
B 10-20	11	1 bone
C 20-30	8	0
D 30-40	4	0
E 40-50	0	0

Table 2. The artefact assemblage from subsoil sample

F.2 – Tree throw. Fill [004]; moderately compact mid grey brown sandy silty clay with moderate small and medium sub-angular flint gravel and moderate flint flakes, occasional burnt flint and stone and very occasional flecks of charcoal. Cut [005]; straight shallow side to the south, steep and undercut side to the north with flat uneven base. Maximum width 0.65m, maximum depth 0.30m.

F.3 – Ditch. Fill [007]; moderately compact mid brown sandy silty clay with frequent small and medium sub-angular stones. Cut [007]; sloping to moderately concave sides with gradual break of slope and concave base. Maximum width 1.00m, maximum depth 0.27m.

F.4 – Tree throw. Fill [008]; moderately compact mid to dark brown sandy silty clay with moderate small and medium sub-angular stones. Cut [009]; very shallow sides due to truncation with uneven concave base. Maximum width 0.55m, maximum depth 0.09m.

Trench 4

This trench was across the gravel car park to the west of the public house on a north-south alignment. A layer of hardcore material covered the subsoil which was considerably shallower in this area, suggesting some slight truncation. Two features were recorded; a posthole (F.5) that produced no artefacts, and a pit (F.6) that produced bone and two pieces of pottery dating to the 13th and 15th century. The pit also yielded the richest charred plant remains recovered from the site; including free-threshing wheat with one rye grain, fragments of a straw base, burnt clay, large vertebrate and small vertebrate bones, eggshell and mussel shell (see environmental report below).

F.5 – Posthole. Fill [010]; moderately compact mid brown grey sandy silty clay with occasional small sub-angular gravel. Cut [011]; circular in plan, straight and near vertical sides with moderate break of slope and concave base. Maximum width 0.25m, maximum depth 0.27m.

F.6 – Pit. Fill [012]; moderately compact mid grey brown sandy silty clay with moderate small and medium sub-angular gravel inclusions, moderate charcoal flecks and fragments. Cut [013]; circular in plan, steep straight/convex sides with moderate break of slope and concave base. Maximum width 0.70m, maximum depth 0.30m.



Figure 3. Trench 3

Discussion

The earliest evidence for archaeological activity at the site was provided by a coherent assemblage of Late Mesolithic flints recovered from a tree throw in Trench 3. The pit also yielded environmental remains, which combined with the worked flint, are indicative of occupation. Further evidence of prehistoric activity was provided by flints that can be dated broadly to the Late Mesolithic/earlier Neolithic recovered from another tree throw and residual in nearby features and the subsoil, all in the western area of the site.

Prehistoric activity has been identified in the wider landscape, in the form of flint scatters, such as at Hinxtton quarry to the south, (Evans 1993), and excavations carried out by the CAU at Heathfields in 1999. Flint distributions at Heathfields were interpreted as the remains of workshop areas where raw material was extracted from natural fissures that were probably exposed close to the surface, and underwent initial reduction producing cores, flakes and blade blanks for further use (McFadyen 1999).

Mesolithic people lived a mobile existence and evidence of occupation took the form of 'activities' (such as flint working and food processing around hearths) with concentrations of flint tools and working waste. Assemblages of tools provide evidence for different tasks, such as hunting and processing, and localised tree clearance and subtle woodland management, which played a significant part in Mesolithic life (McFadyen 2007). These acts of clearance would form bowls in the ground that act as catchment areas for artefacts, and a cluster of tree throws with artefacts in them could represent an act of habitation (Evans et al 1999).

Considering the context, surprisingly limited evidence of medieval activity was revealed during the evaluation; one pit was exposed that contained pottery dating to the 13th and 15th centuries. However a nearby undated posthole and ditch are potentially contemporary with the pit, the environmental remains recovered from the pit and the ditch are comparable and likely to be medieval. The eastern part of the PDA subjected to evaluation revealed evidence of truncation due to the construction and subsequent destruction of 19th century buildings in that area. Just one earlier feature was exposed, an undated ditch.

The evaluation revealed evidence for prehistoric activity in the area, in the form of tree throws containing broadly contemporary worked flint assemblages and the remains of processing linked to occupation, as well as residual flint in later features, all focused around Trenches 3 and 4. The coherent assemblage of Late Mesolithic flint and environmental remains offer an insight into the lives of prehistoric people who inhabited a landscape during a time where they lived a mobile existence. The evaluation also revealed evidence of medieval activity in the form of a pit and a potentially contemporary ditch and post hole.

Acknowledgements

The evaluation was commissioned by QuBE Planning on behalf of The Red Lion Hotel. The archaeology was excavated and interpreted by Dave Strachan and Virginia Vargo and the trenches were surveyed by Donald Horne. The machine excavation was conducted with great care by John from Lattenbury Services. Emma Beadsmoore managed to Project, Jason Hawkes catalogued the finds and Jane Matthews assisted with the illustrations.

Bibliography

- Allen, J. L. & Holt, A. 2002. *Health and Safety in Field Archaeology*, SCAUM
- Anderson, K. 2008. *Red Lion Hotel, Duxford, Cambridgeshire; An Archaeological Desk Base Assessment*. CAU Report 827
- Bakels, C. 1991. 'Western Continental Europe', pp.279–98 in W. van Zeist, K. Wasylikowa and K. Behre (eds.), *Progress in Old World Palaeoethnobotany*. Rotterdam: Balkema.
- Beadsmoore, E. 2008. *Red Lion Hotel, Whittlesford Bridge, Cambridgeshire; Project specification for archaeological evaluation*
- Beedham, G.E. 1972. *Identification of the British Mollusca*. Amersham: Hulton Educational Publications.
- Cotter, J. 2000, Post-Roman Pottery from Excavations in Colchester 1971-85. *Colchester Archaeol. Rep.* 7
- Edwards, D. & Hall, D. 1997. 'Medieval pottery from Cambridge', *Proc. Cambridge Antiq. Soc.* 86, 153-68
- Evans, C. 1993. *Archaeological Investigations at Hinxton Quarry, Cambridgeshire*. CAU Report No. 88
- Evans, C., Pollard, J., & Knight, M. 1999. Life in woods; Tree-throws, 'settlement' and forest cognition. *Oxford Journal of Archaeology* 18(3) pp 241-254
- Greig, J.R.A. 1991. 'The British Isles', pp. 299–334 in W. van Zeist, K. Wasylikowa and K. Behre (eds.), *Progress in Old World Palaeoethnobotany*. Rotterdam: Balkema.
- Hather, J.G. 1993. *An archaeological guide to root and tuber identification. Vol.1, Europe and South West Asia*. Oxford: Oxbow Books.
- Huggins, P. J. 1972. 'Excavations at Waltham Abbey, 1970-2', *Essex Archaeol. and Hist.* 4, 30-127
- McFadyen, L. 1999a. *An Archaeological Evaluation at Heathfields 2, Duxford, Cambridgeshire*. CAU Report 326
- McFadyen, L. 1999b. *Archaeological Fieldwalking at Heathfields 2, Duxford, Cambridgeshire*. CAU Report 339.

McFadyen, L. 2007. Mobile spaces of Mesolithic Britain. *Home Cultures, Volume 4, Issue 2*, pp 115-126

Moffett, L. 1994. 'Charred cereals from some ovens/kilns in late Saxon Stafford and the botanical evidence for the pre-*burh* economy', pp.55–64 J. Rackham (ed.) *Environment and economy in Anglo-Saxon England* (CBA Research Report 89). York: Council for British Archaeology.

Moffett, L., Robinson, M.A. and Straker, V. 1989. 'Cereals, fruits and nuts: charred plant remains from Neolithic sites in England and Wales, and the Neolithic economy', pp.243–61 in A. Miles, D. Williams and N. Gardner (eds.) *The Beginnings of Agriculture* (BAR Int. Series 496). Oxford: British Archaeological Reports.

Murphy, P. 1997. 'Environment and Economy' [Roman], pp. 42–3 in J. Glazebrook (ed.), *Research and Archaeology: a framework for the Eastern Counties, 1. Resource Assessment*. (East Anglian Archaeology Occasional Paper 3). Norwich: Scole Archaeological Committee.

Oswald, A. 1975. *Clay Pipes for the Archaeologist*. Brit. Archeol. Rep. Brit. Ser. 14
Spence, C. 1990. *Archaeological Site Manual*. MOLAS

Stace, C. 1997. *New Flora of the British Isles* (second edition). Cambridge: Cambridge University Press.

Whittaker, P., Evans, C & Gibson, D. 2002. *Granham's Farm, Great Shelford, Cambridgeshire; An Archaeological Evaluation*. CAU Report 514

Zeevat, R. 1993. The Milton Keynes Project. *Rec Buckinghamshire*, 33, pp 49-63

Williams, D. 1973. Flotation at Siraf. *Antiquity* 47, 288–92.

Appendices

Specialist Reports

Flint report

Emma Beadsmoore

A total of 97 (<393g) flints were recovered from the site, from features and the subsoil. The majority of the flints, 92 (<388) are worked, whilst 5 (<5) are burnt and worked. Two tree throws yielded flints that are likely to have been broadly contemporary with the features, whilst the remaining flints were residual in later features. The flints are listed by type and feature in Table 3.

Feature	Type										totals
	chip/chunk	secondary flake	tertiary flake	secondary blade	tertiary blade	core rejuvenation flake	single platform core	opposed platform core	multiple platform core	microlith	
2	12	8	11		2	2	1			1	37
3	11	2	3			1		1			18
4			1								1
6	10										10
10			1								1
subsoil spit A	2		3								5
subsoil spit B	5	2	3		1						11
subsoil spit C	2	4	1	1					1		9
subsoil spit D	1		1			1					3
subsoil		1									1
Sub totals	43	17	24	1	3	4	1	1	1	1	96

Table 3: Flint types and quantities

Tree throws

Tree throw F. 2 yielded the largest assemblage of flints. The only tool in the 37 flint assemblage is a Late Mesolithic microlith. The remainder of the material is flint working waste and flake/blade blanks. An exhausted single platform blade core is amongst the material, whilst further evidence for systematic flake/blade production/core reduction is provided by core rejuvenation flakes and narrow flake and blade blanks characteristic of Late Mesolithic/earlier Neolithic flint working strategies. The second tree throw, F. 4 yielded only one flint, a potentially Late Mesolithic/Neolithic flake.

Residual flint

The remaining flint recovered from the site was residual in later features or in the subsoil. Ditch F. 3 yielded 19 flints, several of which are technologically comparable to the assemblage recovered from F. 2; including several narrow flakes, a core rejuvenation flake and an opposed platform core. The flint was residual in the ditch, which was adjacent to F. 2, suggesting that flint contemporary with F. 2 was deposited and survived in the surrounding subsoil to become inadvertently incorporated into later features. Residual flint recovered from F. 6 is just tiny chips, whilst F. 10 yielded a chronologically non-diagnostic flake.

The metre section of the subsoil excavated in 10 cm spits yielded a total of 28 flints, many of which are technologically comparable to the flints recovered from F. 2. However, the subsoil also included a couple of flints that are potentially later; the products of expedient flake production/core reduction, these flints are either the chronologically non-diagnostic waste of the earlier systematic flint working, or the products of later unsystematic flake production/core reduction.

Conclusion

A coherent assemblage of flint working waste and by products, including one tool, was recovered from a tree throw at the site. The material is Late Mesolithic and likely to be broadly contemporary with the tree throw. Material of comparable technology, broadly datable to the Late Mesolithic/earlier Neolithic was also residual in later features and the subsoil. However, potentially later material was also recovered from the subsoil.

An Assessment of the pottery

Richard Newman

Only a very small quantity of pottery (consisting of ten sherds, weighing 171g) was recovered from the Red Lion site. This material was derived from two separate features, one of medieval and one of 20th century date.

F.06

Three sherds of medieval pottery, weighing 26g, were recovered from this feature. This includes two sherds of Coarseware (in both grey and brown fabrics) that were derived from utilitarian kitchenware vessels of 13th to 15th century date. In addition, a single sherd of Essex Redware, weighing 10g, was also recovered. Vessels in this fabric typically comprise fine quality jugs that were manufactured at a variety of sources in Essex during the 13th to 15th centuries (Cotter 2000, 75-91). Although a number of Essex Redware production centres are known – including Sible Hedingham, Colchester, Mill Green and Harlow (Huggins 1972) – the majority of material imported into Cambridgeshire appears to be 15th century in date (*cf.* Edwards & Hall 1997).

Fabric	No.	Wt (g)
Essex Redware	1	10
Grey Coarseware	1	2
Brown Coarseware	1	14
TOTAL	3	26

Table 4: Pottery fabrics recovered from **F.06**.

F.10

Four sherds of 20th century pottery, weighing 85g, were recovered from this feature. This includes three sherds of Unglazed Red Coarseware that derive from a flowerpot manufactured by Sankys of Bulwell, Nottinghamshire. Although production began at this factory in 1855, the majority of material encountered in Cambridgeshire is 20th century in date (Craig Cessford, *pers comm.*). In addition, a single sherd of Utilitarian English Stoneware was also recovered from this feature; this is derived from a large storage vessel that is again probably 20th century in date.

Fabric	No.	Wt (g)
English Utilitarian Stoneware	1	23
Unglazed Red Coarseware	3	62
TOTAL	4	85

Table 5: Pottery fabrics recovered from **F.10**.

Unstratified

Three sherds of late 19th/early 20th century transfer print decorated Refined White Earthenware, weighing 60g, were recovered as a surface find in trench 1B. These sherds represent elements of two vessels, a tea cup and a plate, which were derived from the same service manufactured by Maple of London. They are very likely to represent service wares used in the nearby pub during the early 20th century.

An Assessment of the clay tobacco pipe

Richard Newman

A single fragment of clay tobacco pipe stem, weighing 11g, was recovered from the topsoil. In general, the presence of clay tobacco pipe fragments in a context indicates a date between the late 16th and early 20th centuries (c.1580-1910). It is normally only possible to derive a precise date from bowls, marked pieces and some heel or spur fragments (*cf.* Oswald 1975). Stem bore aperture is a less reliable indicator of date as it altered at a much slower rate than the changing fashions of bowl form. However, the very wide stem bore aperture and thick stem fabric of this example indicates that it is probably relatively early (*i.e.* 17th century) in date.

An Assessment of the glass and animal bone

Jacqui Hutton

Animal bone weighing 466kg was recovered from the evaluation at the Red Lion Public House. This represents a relatively small assemblage from a site with moderately prolonged occupation, the bone was recovered from later features within the area where any material culture relating to potential medieval activity had since been removed and/or destroyed. Two modern burials of small dogs were also recorded.

The glass assemblage recovered from Trench 1b relates to the occupation of a public house and a sample was retained providing a date of mid 20th century.

Evaluation of environmental remains at The Red Lion, nr. Duxford (RLD08)

Rachel Ballantyne

Methodology

Three samples were submitted for analysis; late mesolithic/neolithic tree throw [4] F.2, and probable later features pit [12] F.6 and ditch [6] F.3. All samples have been flotation sieved by Dan Britton using a modified version of the Siraf tank (Williams 1973) at the CAU. Flots >300µm and heavy residues >1mm have been dried, and then sorted by the author using a Leica MS5 (x6.3 – x50) binocular microscope for the entire flot, and by eye for the 2–4mm residue. The 1–2 mm residue has not been sorted at this stage, but kept for future reference. Full raw data is summarised in Table 6 at the end of this report. Nomenclature follows Stace (1997) for plants, and Beedham (1972) for molluscs.

Preservation

Charring has preserved all plant remains. There is no evidence of waterlogging, although a very small proportion of the mollusc shells are characteristic of damp to wet places; mollusc remains are however sporadic, and are not suitable for detailed analysis.

The charred cereal grains are heavily puffed and distorted, making closer identifications difficult; their condition suggests high charring temperatures, which is consistent with the vitrified charcoal. The nutshell, small tubers, stem and root fragments in [4] F.2 are fragmented but in good condition.

Results

Tree-throw fill [4] F.2 contains several fragments of hazelnut shell (*Corylus avellana*), accompanied by small roots/tubers (<4mm diam.), fragments of fine woody stems (<2mm diam.) and wood charcoal. There is numerous worked flint, with a few burnt flint and burnt clay fragments. Mollusc shells are very few, and so cannot be used to interpret the palaeoenvironment.

Ditch [6] F.3 has four burnt cereal grains, of which one is free-threshing wheat (*Triticum aestivum sensu lato*) and one is wheat or rye (*Triticum/Secale* sp.). There is a low quantity of charcoal, plus worked flint, burnt flint, burnt clay and two amphibian bones. The few mollusc shells are generally of open, dry places.

Pit [12] F.6 contains the richest charred plant remains recovered. There are twenty-two grains of free-threshing wheat with one rye grain (*Secale cereale*) and many others that are comparable to wheat or are too poorly preserved to identify. Other items include fragments of a straw base (basal culm node), burnt clay, worked flint, large vertebrate and small vertebrate bones, eggshell and mussel shell (*Mytilus edulus*). The widest range of mollusc shells are also found in this context, and are generally of open, dry places (*Vertigo* cf. *pymaea*, *Pupilla muscorum*, *Vallonia exentrica*), however two (*Punctum pygmaeum* and Sphaeridae indet.) suggest shady, damp to wet conditions.

Interpretation

The charred plant assemblage suggests two very different origins for material. In tree-throw [4] F.2 the mixture of nutshell and roots/tubers/stems of wild plants is characteristic of mesolithic to neolithic archaeology across northwest Europe (Grieg 1991, Bakels 1991, Moffett et al. 1989). That these charred plant remains are accompanied by worked flint, burnt flint and burnt clay indicates quite rich occupation debris, particularly given that the original sample was 10 litres in volume. Roots and tubers can be challenging to identify (Hather 1993), but are an important and still under-utilised source of evidence for prehistoric diet.

The second origin would appear to be cooking or baking that has contributed very puffed grains of free-threshing wheat and rye to pit [12] F.6, and less so to ditch [6] F.3. One basal culm node indicates the presence of straw, which was once used as bedding in ovens (Moffett 1994). The eggshell and mussel shell fragments in pit [12] F.6 are also characteristic of food waste.

Although free-threshing wheat is found sporadically in the neolithic (Grieg 1991), and during Roman times occasionally with spelt wheat, it does not occur in abundance until the Saxon period when it becomes the main crop of medieval Britain. Rye is found very rarely upon Bronze Age settlements (ibid.), and does not become a notable crop until the very late Roman to early Saxon period in East Anglia (Murphy 1997). The combination of free-threshing wheat with rye thus suggests a post-Roman date for the fills of these two features. If so, then the worked flint in pit [12] F.6 and ditch [6] F.3 must be redeposited from an earlier context.

Conclusions

There is good evidence for rich mesolithic/neolithic occupation debris in the excavated tree-throw F.2. Negative features pit F.6 and F.3 appear to derive from later, probably post-Roman, activity and include waste from baking and food preparation. There are worked flints in all the sampled contexts, suggesting their re-deposition into the later features and raising the possibility that some worked flint originates from the buried soil itself.

Recommendations

The one mesolithic/neolithic feature evaluated has relatively rich occupation debris, and good preservation of charred plant macro-remains. Any future excavation in this area should aim to sample equivalent features as fully as possible; bulk samples should be a minimum of 30 litres (two full buckets) where context size permits. 100% sampling of such features should be considered, not only for the recovery of charred plant remains but also for small artefacts, particularly worked flint.

A small number of bulk samples from the buried soil itself would clarify the artefactual background ‘noise’ that may have contributed to contemporary and later features. The buried soil could well be a mixture of sediments and artefacts running as a continuum from the late mesolithic/neolithic to recent times. The nearby chapel and structures may have had associated garden cultivation that could deepen and protect a buried soil horizon.

Features of post-Roman date are not of particular interest, unless their type and distribution during open area excavation reveals relationships to the listed Chapel or other nearby structures. Then questions might be raised regarding status of associated diet, and any agricultural activities. The charred grain discussed in this report can only be dated reliably by radiocarbon, not by range of taxa.

Sample number		<2>	<3>	<4>
Context number		[12]	[4]	[6]
Feature number		F.6	F.2	F.3
Feature type		pit	tree throw	ditch
Period		?	meso/neolithic	?
Sample volume/ litres		10 L.	10 L.	10 L.
Fraction of flot sorted		1/1	1/1	1/1
Latin Name	English Name / Mollusc habitat			
CEREAL GRAINS				
<i>Triticum aestivum sensu lato</i> grain	free-threshing wheat grain	22		1
<i>Triticum</i> sp. grain	wheat grain	7		
<i>Secale cereale</i> L. grain	rye grain	1		
<i>Hordeum/ Triticum</i> sp. grain	barley or wheat grain	2		
<i>Triticum/ Secale</i> sp. grain	wheat or rye grain			1
<i>Secale/Avena</i> sp. grain	rye or wild/cultivated oat grain	1		
cereal indet. grain		17		2
CEREAL CHAFF				
cereal indet. basal culm node	base of cereal straw, with root attachments	1		
OTHER PLANT PARTS				
<i>Corylus avellana</i> L. nutshell	hazelnut shell fragment		+	
small tubers (<4mm) indet.			3	
small stem and root fragments (<2mm in diameter)			++	
CHARCOAL				
volume of charcoal/ millilitres		1 ml.	< 1 ml.	< 1 ml.
large charcoal (>4mm)		+	-	-
med. charcoal (2-4mm)		+	+	+
small charcoal (<2mm)		++	++	++
- vitrified charcoal		+	+	+
charred concretion				-
OTHER ARTEFACTS				
bone fragments		+		
small bone		-		
amphibian bone				-
eggshell		-		
worked flint		+	++	+
burnt flint			+	+
burnt clay		+	-	-
MOLLUSCS				
<i>Lymnaea truncatula</i> (Müller)	shallow waters & flooded pastures		-	
<i>Cochlicopa lubrica</i> (Müller)/ <i>lubricella</i> (Porro)	catholic			-
<i>Vertigo</i> c.f. <i>pygmaea</i> (Draparnaud)	dry, grassy places; occ. marshes	-		
<i>Pupilla muscorum</i> (L.)	dry, exposed places	+	-	-
<i>Vallonia exentrica</i> Sterki	open, dry habitats	+	-	+
<i>Trichia hispida</i> (L.) TYPE	catholic	+		+
<i>Punctum pygmaeum</i> (Draparnaud)	leaves & moss in damp, shady places	+		
Sphaeridae indet.	small freshwater bivalve	-		
<i>Mytilus edulus</i> L.	mussel shell	-		
INTRUSIVE BIOLOGICAL ITEMS				
<i>Chenopodium album</i> L.	fat-hen			-
<i>Sambucus nigra</i> L.	elder			-
untransformed roots	probably intrusive plant roots	-	-	+
<i>Cecilioides acicula</i> L.	burrowing snail, probably intrusive	+++	+++	++

Table 6: Results of the environmental bulk sample, The Red Lion, nr. Duxford (RLD08)

KEY: - 1 or 2 items, + less than 10 items, ++ 10 to 50 items