A borehole in Osborne Street and a test-pit in Stanwell Street, Colchester, Essex July 2007

report prepared by Donald Shimmin

on behalf of Caddick/RPS Group

NGR: borehole TL 9977 2494 test-pit TL 9973 2488 CAT project refs: borehole 07/7f test-pit 07/7e Colchester Museums accession codes: borehole 2007.82 test-pit 2007.81



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1 Summary

A borehole was drilled to a depth of 7m on the south side of Osborne Street. A thick deposit of post-Roman topsoil or 'dark earth' sealed an undated peaty layer just above undisturbed natural sand and gravel. Samples were taken for pollen, palaeoenvironmental and geological analyses, and for radiocarbon dating. A test-pit near the junction of Stanwell Street and Southway revealed a modern service trench and other obstructions at a depth of 0.5m.

2 Introduction (Fig 1)

- 2.1 A borehole was drilled in Osborne Street on 12th July 2007 and a test-pit was dug in Stanwell Street on 11th July 2007 by the Colchester Archaeological Trust (CAT). The drilling was co-ordinated by Waterman Environmental and monitored by CAT. This work was carried out on behalf of Caddick and the RPS Group.
- **2.2** The borehole and test-pit are part of a long-term fieldwork programme prompted by the need to assess the archaeological, geological and palaeoenvironmental implications of the proposed Vineyard Gate regeneration scheme, which affects a large part of the area bounded by the Vineyard Street town wall, St Botolph's Street, Stanwell Street and Southway (Johnson *et al* 2003).
- **2.3** The borehole was located on the pavement on the south side of Osborne Street near the junction with Stanwell Street. It is probably situated on the south side of a small valley with an underground watercourse which flows west-east and in recent times surfaced a short distance to the east of St Botolph's priory.
- **2.4** The test-pit was located on a grass verge on the west side of Stanwell Street at the junction with Southway. This is the location for a proposed widening of Stanwell Street at its opening on to Southway.
- 2.5 This report follows the standards set out in Colchester Borough Council's *Guidelines* on standards and practices for archaeological fieldwork in the Borough of Colchester (CM 2002) and *Guidelines on the preparation and transfer of archaeological archives* to Colchester Museums (CM 2003), and the Institute of Field Archaeologists' Standard and guidance for archaeological field evaluation (IFA 1999) and Standard and guidance for the collection, documentation, conservation and research of archaeological materials (IFA 2001). The guidance contained in the documents Management of archaeological projects (MAP 2), and Research and archaeology: a framework for the Eastern Counties 1. Resource assessment (EAA 3), Research and archaeology: a framework for the Eastern Counties 2. Research agenda and strategy (EAA 8), and Standards for field archaeology in the East of England (EAA 14) was also followed.

3 Archaeological background

3.1 Excavation took place in 1988-9 on the south side of Osborne Street prior to the construction of the NCP multi-storey car-park. On the Stanwell Street frontage (site C, Shimmin 1994; Urban Archaeological Database or UAD no 3028), the excavation exposed the floors of a 16th- to 17th-century timber-framed building that had been destroyed by fire, probably during the Siege of Colchester in 1648. In a small trench (site B) at the northern edge of the site, close to the position of the borehole, was part of a stake-and-wattle fence of probable 16th-century date.

At the eastern end of the site (site A) were floors from a Roman building. These lay at a depth of 3.0-3.5m, and were sealed by the well-preserved remains of medieval wicker-lined drains and fences. These deposits were sealed in turn by the remains of a series of later medieval and post-medieval buildings that occupied a plot of land fronting onto St Botolph's Street to the east.

3.2 Roman tessellated floors and cremation burials appear among records of chance discoveries made in the Osborne Street area in the 19th and early 20th centuries (Hull 1958, 244-5 & 294-5). Since these were recorded with varying degrees of precision, their exact locations are, in the main, uncertain.

3.3 A series of archaeological evaluation trenches was dug to the north of Osborne Street between January and May 2004, as part of an assessment of the archaeological potential of the Vineyard Gate area of Colchester (Crossan 2005, 26; CAT Report 269). These revealed extensive Roman remains, especially towards the western end of Osborne Street. Further east, medieval deposits were partially uncovered at depths of up to 3.5m and included well-preserved wood, leather and other organic remains. Here the height of the water table prevented excavation down to Roman levels.

4 Aims

The aims of the borehole and the test-pit were to establish and record the depth, date and significance of the archaeological deposits surviving in this part of town. This information could then be combined with the existing knowledge of sites in the surrounding area in order to assess the likely impact of the proposed development on the archaeological remains.

5 Methods

- **5.1** The borehole was drilled on 12th July 2007. The existing paving slabs and modern make-up were removed beforehand and the upper levels dug by hand to a depth of 1.2m. The borehole was drilled to a depth of 7m in 1m sections, and was 100mm in diameter. Ground conditions were typically moist.
- **5.2** The test-pit measured 1.5m square and was dug on 11th July 2007. The turf was removed and digging continued by hand. A small quantity of finds was recovered (see section 7). Further details of the methodology used can be found in the CAT document *Policies and procedures* (CAT 2006).
- **5.3** The arisings from the upper 2m of the borehole were not examined in detail. The arisings from the remaining five sections were laid out for inspection in polythene tubes. The 3-4m section was removed from the site for further sampling.

The arisings were logged on site and described in terms of parameters such as depth, colour, texture and inclusions. Soil colour was determined with reference to Munsell soil colour charts on moist samples. Digital photographs were also taken. A small quantity of finds was recovered (see section 7).

6 Results

6.1 Below the turf in the Stanwell Street test-pit was a layer of modern topsoil, 0.5m thick. At this depth, a modern gas service trench extended roughly north-south across the middle of the test-pit. To the west of this was a layer of modern concrete. In the eastern part of the trench was a layer of sandy gravel, which was probably modern make-up.

Due to the difficulties encountered on site, the excavation of the test-pit was discontinued.

6.2 A summary of the Osborne Street borehole log is given in Table 1.

Table 1: Osborne Street borehole log.

Modern ground-level: 18.05m AOD.

Depth (m)	Description	Provisional interpretation
0.0-0.065	paving slabs	existing pavement
0.065-0.28	pale brown sand	modern make-up
0.28-0.5	light grey concrete	modern make-up
0.5-0.77	brown (10YR 5/3-6/3) sandy clay loam, moderate brick/tile & mortar fragments & small-medium gravels	post-medieval/ modern dump/ make-up

0.77-1.22+	dark greyish-brown (10YR 4/2) sandy clay loam, moderate brick/tile fragments & small-medium gravels	'dark	post- medieval dump/ topsoil
2.0-3.0	dark greyish-brown (2.5Y 3/2-4/2) sandy clay loam, moderate small-medium gravels, sparse charcoal and mortar flecks	earth' (L1)	medieval/ post- medieval topsoil/ pitfill
3.0-3.25	dark grey (10YR 4/1) sandy clay loam, moderate small-medium gravels, sparse charcoal flecks with occasional fragments of brick/tile, included peg- tile, & animal bone		medieval/ post- medieval topsoil/ pitfill
3.25-3.35	light brownish-grey (10YR 6/2) clay loam, moderate small-medium gravels & charcoal flecks	undate water-la	ed dump/ in deposit
3.35-3.77	dark greyish-brown (10YR 3/1-3/2) peaty clay loam, moderate small-medium gravels, sparse mortar & burnt daub flecks, abundant decayed vegetation	undated	peat (L2)
3.77-4.0	light brownish-grey (10YR 6/2) clay loam, moderate small-medium gravels, sparse charcoal flecks	undate water-la ()	ed dump/ in deposit L3)
4.0-4.2	greyish-brown (2.5Y 5/2) loamy sand, moderate- abundant small-medium gravels	natural s (I	and/gravel L4)
4.2-5.63	light brownish-grey (10YR 6/2) sand, abundant small-medium gravels	natural s (I	and/gravel L4)
	5	,	

- **6.3** Apart from modern make-up, the archaeological sequence consisted mainly of post-Roman topsoil or 'dark earth' (L1), 2.5m thick. Three fragments of peg-tile of late medieval/post-medieval date and a piece of animal bone were recovered from near the base of this layer. An environmental sample was taken from the bottom of this layer (see Appendix 2). The 'dark earth' probably consisted mainly of medieval and post-medieval topsoil and pits. There was no definite evidence for buildings or other structural remains.
- **6.4** Below the 'dark earth' was a well-defined peaty layer (L2), 0.42m thick. This contained much decayed vegetation, and it was sampled for pollen (see Appendix 1) and for plant macrofossils (see Appendix 2). No finds were recovered from L2 and it remains undated. Some woody fragments were recovered from L2 and sent for a radiocarbon date. A medieval or Roman date seems the most likely.

There were thin grey clayey deposits immediately above and below L2. These were possibly water-lain deposits. Two small undiagnostic brick/tile fragments were recovered from the upper clayey layer. An environmental sample was taken from the lower clayey layer (L3; see Appendix 2).

6.5 Natural sand and gravel (L4) was reached at a depth of 4m. A sample of L4 was taken for analysis (see Appendix 3). London Clay was reached at a depth of 5.63m.

7 Finds

- **7.1** Small quantities of finds were recovered during the drilling of the borehole and the digging of the test-pit, and are listed in detail in the archives.
- **7.2** At the Osborne Street borehole, two post-medieval pottery sherds came from the upper levels of the 'dark earth' (L1; 0.77-1.2m deep) and three pieces of peg-tile and an animal bone fragment were recovered from the lower levels of 'dark earth' (L1; 3.0-3.25m deep).
- **7.3** Finds from the modern topsoil in the Stanwell Street test-pit included two Roman pottery sherds, a modern stoneware sherd, two fragments of peg-tile, two oyster shells, and an iron nail fragment.

8 Discussion

- 8.1 The Osborne Street borehole demonstrated the considerable thickness of archaeological deposits (4m deep) in this area, and also the moist, organic-rich soil conditions. There was no evidence for occupation deposits or structural remains, probably due to the distance from the St Botolph's Street and Stanwell Street frontages. Osborne Street is a 19th-century development.
- **8.2** The pollen (Appendix 1) and plant macrofossil (Appendix 2) assemblages provide evidence for a wide range of plant species, especially from the peaty layer (L2). The latter included wetland species such as alder, sedge, rush and marsh marigold, indicating the probable marshy conditions within the former west-east watercourse.
- **8.3** A peaty layer similar to L2 was observed sealing natural sand and gravel at a depth of 3m during trial-trenching on the south side of Osborne Street in 1988-9 (site archive). A scatter of Roman finds was found sealing natural sand and gravel nearby (Shimmin 1994, 48). However, in the borehole, peg-tile was recovered from the post-Roman topsoil or 'dark earth' (L1) immediately above L2. On present evidence, therefore, the peaty layer could be Roman, medieval or of some other date. A sample of wood from L2 has been sent for radiocarbon dating.
- 8.4 The exact position of the former west-east watercourse is unclear. In the grounds of St Botolph's priory, some 200m to the east of the borehole, it probably lay about 120m south of the town wall. The borehole was roughly 80m south of the town wall and it is assumed in this report that the position of the borehole was on the south side of a former small valley (Fig 2). This assumption appears to be reinforced by the deep, waterlogged deposits encountered in the southern part of Arthur Street, 70m to the east (CAT Report 269, 5-6). However, whether the line of the former watercourse coincides approximately with Osborne Street or whether it followed a more southerly course, roughly parallel to the town wall, remains uncertain.

9 Archive deposition

The evaluation archives, including the site records, photographs and finds, will be permanently deposited with Colchester and Ipswich Museums under accession codes 2007.82 (Osborne Street borehole) and 2007.81 (Stanwell Street test-pit).

10 Acknowledgements

We are grateful to Caddick for funding the work and to Robert Masefield of RPS Group for commissioning and helping to organise the fieldwork. The drilling of the Osborne Street borehole was co-ordinated by Waterman Environmental. We would also like to thank Dr Becky Briant for her help during the drilling and for her report, and also the other specialists, Dr N P Branch and Val Fryer, for their reports.

11 Glossary

AOD	above Ordnance Survey datum point based on mean sea level at
	Newlyn, Cornwall
context	specific location on an archaeological site, especially one where
	finds are made; usually a layer or a feature
'dark earth'	post-Roman topsoil; probably the result of long-term cultivation,
	refuse disposal and pit-digging.
feature	an identifiable context, such as a pit, a wall or a post-hole
IFA	Institute of Field Archaeologists
medieval	period from AD 1066 to <i>c</i> AD 1500
modern	period from c 1850 onwards to the present
NGR	National Grid Reference
natural	geological deposit undisturbed by human activity
peg-tile	rectangular roof tile of medieval or later date
post-medieval	period from <i>c</i> 1500 to <i>c</i> 1850

Roman	the period from AD 43 to <i>c</i> AD 410
UAD	Urban Archaeological Database, maintained by Colchester
	Museums
U/S	unstratified, ie without a well-defined context

12 References

CAT	2006	Colchester Archaeological Trust, Policies and
CAT Report 269		An archaeological evaluation at Vineyard Gate, Colchester, Essex, January-April 2004, 1: interim results, unpublished CAT archive report, by Carl Crossan and Ban Holloway, 2004
СМ	2002	Guidelines on standards and practices for archaeological fieldwork in the Borough of Colchester
СМ	2003	Guidelines on the preparation and transfer of archaeological archives to Colchester Museums
Crossan, C	2005	'Beyond the walls', in <i>the Colchester Archaeologist</i> , 18 , 26
EAA 3	1997	Research and archaeology: a framework for the Eastern Counties 1. Resource assessment, East Anglian Archaeology, Occasional Papers, 3 , ed by J Glazebrook
EAA 8	2000	Research and archaeology: a framework for the Eastern Counties 2. Research agenda and strategy, East Anglian Archaeology, Occasional Papers, 8 , ed by N Brown & J
EAA 14	2003	Standards for field archaeology in the East of England, East Anglian Archaeology, Occasional Papers, 14 , by D
Hull M B	1958	Boman Colchester BBCSAL 20
IFA	1999	Standard and guidance for an archaeological field evaluation
IFA	2001	Standard and guidance for the collection, documentation, conservation and research of archaeological materials
Johnson, A P, Petchey, M R, & Collcutt, S N	2003	St Botolph's quarter regeneration schemes, Colchester. Cultural heritage (archaeology) statement, part 1: background and existing situation (Oxford Archaeological Associates Ltd)
MAP 2	1991	Management of archaeological projects, 2nd edition (English Heritage)
Moore, P D, Webb, J A, & Collinson, M E	1991	Pollen analysis, 2nd edition, Oxford: Blackwell
Reille, M	1992	Pollen et Spores d'Europe et d'Afrique du Nord, Laboratoire de Botanique Historique et Palynologie, Marseille
Shimmin, D	1994	'Excavations at Osborne Street, Colchester', in <i>Essex</i> Archaeology and History, 25 , 46-59
Stace, C	1997	New Flora of the British Isles, 2nd edition, Cambridge University Press
Whiteman, C A	1992	'The palaeogeography and correlation of pre-Anglian- Glaciation terraces of the River Thames in Essex and the London Basin', in <i>Proceedings of the Geologists'</i> <i>Association</i> , 103 , 37-56

13 Appendices

Appendix 1 - Osborne Street borehole: pollen assessment

by N P Branch of ArchaeoScape, Department of Geography, Royal Holloway University of London, Egham Hill, Egham, Surrey, TW20 OEX, UK

Introduction

This report summarises the findings arising out of the pollen-stratigraphic

assessment of three sub-samples obtained from an organic-rich sedimentary deposit (L2) within a borehole core sample taken at Osborne Street by CAT. The aim of the assessment was to evaluate the potential of the deposit for reconstructing the vegetation history of the site.

Methods

Three sub-samples were extracted from an undated organic-rich deposit (L2) at 3.35m (sample <1>), 3.56m (sample <2>) and 3.77m (sample <3>) for assessment of the pollen content. The pollen was extracted as follows:

- 1. Sampling a standard volume of sediment (1ml)
- 2. Deflocculation of the sample in 1% Sodium pyrophosphate
- 3. Sieving of the sample to remove coarse and fine mineral and organic fractions (>125µ and <10µ)
- 4. Removal of finer mineral fraction using Sodium polytungstate (specific gravity of 2.0g/cm³)
- 5. Removal of unwanted organic matter using acetolysis
- 6. Mounting of the sample in glycerol jelly.

Each stage of the procedure was preceded, and followed, by thorough sample cleaning in filtered distilled water. Quality control is maintained by periodic checking of residues, and assembling sample batches from various depths to test for systematic laboratory effects. Pollen grains and spores were identified using the Royal Holloway (University of London) pollen type collection and the following sources of keys and photographs: Moore *et al* (1991); Reille (1992). Plant nomenclature follows the Flora Europaea as summarised in Stace (1997). The assessment procedure consisted of scanning the prepared slides at 2mm intervals along the whole length of the coverslip and recording the concentration and state of preservation of pollen grains and spores, and the principal pollen taxa (Table 2).

Results

The results of the assessment indicate that pollen grains and spores are poorly preserved and occur in low concentrations in samples <1> and <2> (Table 2). There are clear signs of corrosion on the surface of grains and spores, which suggests that the assemblage is biased in favour of the most resistant taxa, ie differential preservation. There are three possible reasons for the poor preservation and low concentrations:

(1) chemical destruction due to a high pH; pollen grains and spores are best preserved in acidic conditions

(2) physical destruction during deposition; this most frequently occurs where the grains and spores are recovered from a coarse mineral-rich sediment
(3) oxidation due to permanent or episodic drying of the sediment surface; pollen grains and spores are best preserved in anaerobic, waterlogged conditions.

In sample <3>, pollen grains and spores are well-preserved and occur in high concentrations (Table 2). The assemblage indicates that the dryland vegetation consisted of mixed deciduous woodland, dominated by lime, elm, oak and birch, with an understorey of hazel shrubs and grasses. The wetland vegetation comprised alder woodland, with an understorey of sedges and grasses. There is also unequivocal evidence for human activity, indicated by the presence of cereal pollen and suggesting localised cultivation.

Depth (m)/ sample number	Preservation	Concentration	Main taxa
3.35 / <1>	Poor	Low	Poaceae (grass)
3.56 / <2>	Poor	Low	Poaceae (grass) <i>Tilia</i> (lime) <i>Quercus</i> (oak) <i>Dryopteris</i> type (buckler fern)

Table 2: Results of the pollen assessment.

3.77 / <3>	Very good	High	Cereale type (eg wheat or barley) Tilia (lime) Quercus (oak) Alnus (alder) Poaceae (grass) Cyperaceae (sedge) Dryopteris type (buckler fern) Pinus (pine) Ulmus (elm)
			<i>Betula</i> (birch) <i>Corylus</i> type (eg hazel)

Recommendations

No further analysis of samples <1> and <2> is necessary due to the poor preservation. However, sample <3>, at the base of the deposit, contains well-preserved grains suitable for a full quantitative analysis. It is also recommended that approximately six further samples are taken near to the location of sample <3> to enable a full stratigraphic analysis to be completed, and to provide information suitable for publication.

Appendix 2 - Osborne Street borehole: an assessment of the plant macrofossils and other remains

by Val Fryer, Church Farm, Sisland, Loddon, Norwich, Norfolk, NR14 6EF

Introduction and method statement

Three samples were taken from wet/waterlogged deposits noted within a borehole situated in Osborne Street in the southern part of the town. The upper clayey loam layer (L1) was of late medieval to post-medieval date. This overlay a dark, compacted organic mud (L2), which in turn overlay a sandy clay (L3). Both of the latter deposits were undated.

1-litre sub-samples of each deposit were processed by manual water flotation/washover, and the flots were collected in a 250-micron mesh sieve. As all three flots were seen to contain waterlogged macrofossils, they were stored in water prior to sorting. The wet retents were scanned under a binocular microscope at magnifications up to x16 and the plant macrofossils and other remains noted are listed on Table 3. Nomenclature within the table follows Stace (1997). Both waterlogged and charred remains were recorded, the latter being denoted within the table by a lower case 'c'.

Results

Plant macrofossils were scarce within the upper and lower deposits, but were moderately common within the organic mud (L2). The macrofossils were moderately well preserved although some crushing and distortion had occurred.

The assemblage from the upper 'dark earth' deposit (sample 1, L1) consisted largely of very small charcoal fragments. However, a single charred wheat (*Triticum* sp.) grain was recorded along with a hazel (*Corylus avellana*) nutshell fragment and a small number of waterlogged elderberry (*Sambucus nigra*) seeds. The organic mud deposit (sample 2, L2) contained the highest density of plant macrofossils. Seeds of grassland herbs and ruderal weeds including hemlock (*Conium maculatum*), dead nettle (*Lamium* sp.), buttercup (*Ranunculus* sp.), mignonette (*Reseda* sp.) and stinging nettle (*Urtica dioica*) were recorded along with seeds/fruits of wetland plants including sedge (*Carex* sp.), marsh marigold (*Caltha palustris*) and rush (*Juncus* sp.). The assemblage from the lower deposit (sample 3, L3) consisted largely of very fragmented waterlogged root/stem fragments, although individual seeds of chickweed (*Stellaria media*), stinging nettle and lesser spearwort (*Ranunculus flammula*) were also recorded along with some waterlogged arthropod remains.

Sample no	1	2	3
Context no	2	3	4
Layer no	L1	L2	L3
Depth	3-3.25m	3.35-3.77m	3.77-4m
Cereals			
Triticum sp. (grain)	xc		
Herbs			
Chenopodium album L.		x	
C. ficifolium Sm.		xcf	
Chenopodiaceae indet.		x	
Conium maculatum L.		х	
Lamium sp.		х	
Malva sp.		х	
Polygonum aviculare L.		х	
Ranunculus acris/repens/bulbosus		х	
Reseda sp.		х	
Rumex sp.		х	
R. acetosella L.		xcf	
Stellaria media (L.)Vill		х	х
Urtica dioica L.		xx	х
Wetland plants			
Apium graveolens L.		x	
Caltha palustris L.		х	
Carex sp.		х	
Juncus sp.		х	
Montia fontana L.		х	
Ranunculus flammula L.			х
Tree/shrub macrofossils			
Corylus avellana L.	xc		
Rubus sect. Glandulosus Wimmer & Grab		xcffg	
Sambucus nigra L.	x	x	
Other plant macrofossils			
Charcoal <2mm	xxxx	xx	x
Charcoal >2mm	x	х	
Charcoal >5mm	x		
Waterloaged root/stem	x	XXXX	XXXX
Indet.bud		х	
Indet.floret	x		
Indet. inflorescence fragments	x		
Indet.seeds	x		
Indet, twig fragments		х	
Wood fragments >2mm		XX	
Wood fragments >5mm		x	
Other materials			
Burnt/fired clav	xx	x	
Marine mollusc shell fragments	x	×	
Waterlogged arthropod remains	~	×	×
Sample volume (litres)	1	1	1
Volume of flot (litres)	ہ ∠01	0.3	<0.1
% flot sorted	100%	50%	100%

Table 3: plant macrofossils and other remains from the Osborne Street borehole.

Key to table

x = 1-10 specimens xx = 10-50 specimens xxxx = 100+ specimens c = charred cf = comparefg = fragment

Conclusions

In summary, the upper deposit (L1) would appear to be largely composed of burnt refuse, although the origin of this material is unclear. The central layer (L2) of organic mud appears to have accumulated within an area of derelict damp grassland or marsh. A low density of charcoal fragments is present but, otherwise, there is little evidence of human activity within the immediate area. Although the lower layer (L3) may have been infiltrated by some plant roots, it would otherwise appear to be little disturbed and may be part of the natural subsoil.

Recommendations for further work

As none of the assemblages contain sufficient material for quantification, no further analysis is recommended.

Appendix 3 - Osborne Street borehole: report on a gravel sample

by Dr Becky Briant, Department of Geography, Queen Mary, University of London Borehole location (handheld GPS): TL 99765 24936, elevation approx 18 m.

Sediment sequence (surface down)

- 1-1.2 m logged by CAT.
- 1.2-3.35 m sticky dark greyish brown sandy clay with fine pebbles/rubble/pottery. Sandier at approx 3 m depth.
- 3.35-3.5 m crumbly dark brown wood peat/organic silt containing small to medium subfossil wood fragments.
- 3.5-3.85 m firm dark grey/brown organic silty clay.
- 3.85-4 m firm medium grey brown silty clay with small angular flint fragments.
- 4-4.3 m loose medium grey sandy gravel with clay.
- 4.3-5.65 m loose grey fine (< 1 cm) to coarse (approx 5 cm) angular to subangular flint gravel with a coarse sand matrix.
- 5.65-7 m stiff blue grey clay with fine sand (interpreted as London Clay) with occasional flint pebbles in the upper 10-20 cm.

Samples were taken for:

Pollen (CAT) – within contexts at 3.35, 3.56 and 3.77 m. Plant macrofossils (CAT) – within contexts at 3-3.25, 3.35-3.77 and 3.77-4.0 m. Clast lithology and fossils (BB) – from 4.7-4.9 m.

The gravel sample (4.7-4.9 m) was taken to assess the likely age of the gravel deposit. It was sieved at 0.5 and 1 mm to look for shells or other fossil material that might suggest a Holocene age. It was sieved at 8-16 and 16-32 mm and pebble lithologies identified and counted to compare with the lithological profile of local Kesgrave sands and gravels. No shell material was found in the smaller size fractions. The lithological composition of the gravels is shown in Table 4. These counts, although too small to be statistically significant, are very similar to both the Ardleigh and Wivenhoe Gravels (Whiteman 1992).

Table 4: the lithological composition of the gravels.

	8-16 mm – count (%)	16-32 mm – count (%)
Nodular flint	82 (70%)	8 (57%)
Tertiary flint	3 (3%)	3 (21%)
Total flint	85 (73%)	11 (78%)

Quartz	14 (12%)	0
Quartzite	15 (13%)	2 (14%)
Chert	4 (3%)	1 (7%)

Regional Pleistocene geology

The local Pleistocene geology is dominated by the Kesgrave Sands and Gravels - a series of gravel deposits at successively lower heights, laid down in a former course of the River Thames during successive cold stages. These are then overlain by a temperate stage soil developed in the top surface of the gravels. To the north of Colchester, Anglian-age glacial sediments overlie the full sequence. Colchester itself is underlain by both the Ardleigh and the Wivenhoe Gravels (Whiteman 1992), the boundary of which runs through the town centre.

The borehole site investigated lies at the bottom of a valley presumably cut into these gravel deposits. Therefore the gravel observed may be either an eroded remnant of one of these gravels or a later (possibly Holocene) fluvial gravel laid down by the stream that occupied this valley until the Middle Ages. Based on field observations, the latter explanation seems most likely because of the grey colouration of the gravel, suggesting that it has been waterlogged since burial. This contrasts with the orange-yellow colouring typical of the Kesgrave deposits. Further investigation of the gravel sample adds little to this initial interpretation. There is no evidence of fossil material that might give a conclusive Holocene age, and the lithological composition is consistent either with *in situ* Kesgrave deposits or reworking of these.

The archaeological potential of the gravel deposits is very much dependent on the age assigned to them. If they are Holocene, as seems most likely, their potential is low, although they may contain inorganic Early Holocene artefects. If they are Kesgrave deposits (dating from c 600-700,000 years ago), then any artefacts, if present, would potentially add significantly to the regional record of scattered finds. Their potential in this case would be medium rather than high.

It is proposed that an opportunity should be provided during ground reduction for a Pleistocene specialist to observe and record a section that clarifies the nature and potential of these gravels, particularly their relationship with the local Kesgrave deposits. Ideally, this section would include both the valley base and *in situ* Kesgrave deposits either side, if these are present within the area for development. In addition, there should be an 'intermittent' watching brief on gravel removal if deemed necessary after this work.

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Fig 1 Location of borehole and test-pit.

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Fig 2 Diagrammatical north-south section through the borehole.



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Essex Historic Environment Record/ Essex Archaeology and History

Summary sheet

Site address Osborne Street, Colchester, Essex			
Parish: St Giles	District: Colchester Borough		
NGR: TL 99765 24936	<i>Site code:</i> Museum accession code: 2007.82		
<i>Type of work:</i> Borehole	<i>Site director/group:</i> Colchester Archaeological Trust		
Date of work: July 2007	Size of area investigated: -		
<i>Location of finds/curating museum:</i> Colchester and Ipswich Museums	<i>Funding source:</i> Caddick		
<i>Further seasons anticipated?</i> No	Related EHER nos:		
Final report:CAT Report 432 and summary in EAH			
Periods represented: post-Roman and possibly earlier			
Summary of fieldwork results: A borehole was drilled to a depth of 7m on the south side of Osborne Street. A thick deposit of post-Roman topsoil or 'dark earth' sealed an undated peaty layer just above undisturbed natural sand and gravel. Samples were taken for pollen, palaeoenvironmental and geological analyses.			
Previous summaries/reports: Shimmin 1994			
Author of summary: D Shimmin	Date of summary: August 2007		

Essex Historic Environment Record/ Essex Archaeology and History

Summary sheet

Site address Stanwell Street, Colchester, Essex	
Parish: St Giles	District: Colchester Borough
NGR: TL 9973 2488	<i>Site code:</i> Museum accession code: 2007.81
<i>Type of work:</i> Evaluation	<i>Site director/group:</i> Colchester Archaeological Trust
Date of work: July 2007	Size of area investigated: 1.5 sq m
<i>Location of finds/curating museum:</i> Colchester and Ipswich Museums	<i>Funding source:</i> Caddick
Further seasons anticipated? No	Related EHER nos:
Final report:CAT Report 432 and summary in EAH	
Periods represented: modern	
Summary of fieldwork results: A test-pit near the junction of Stanwell Street and Southway revealed a modern service trench and other obstructions at a depth of 0.5m.	
Previous summaries/reports: None	
Author of summary: D Shimmin	Date of summary: August 2007