

Archaeological monitoring and recording at New Hall School, The Avenue, Boreham, Chelmsford, Essex, CM3 3HS

February 2016



by Laura Pooley

with contributions by Stephen Benfield
figures by Emma Holloway, Chris Lister and Robin Mathieson

fieldwork by Ben Holloway

on behalf of Nigel Floyd, New Hall School Trust

NGR: TL 7343 1038 (centre)
Planning ref.: CHL 15/01504/FUL & 15/01505/LBC
CAT project ref.: 16/01b
ECC project code: BONHS16
Chelmsford Museum accession code: CHMRE 2016.014
OASIS ref.: colchest3-239904



Colchester Archaeological Trust

Roman Circus House,
Roman Circus Walk,
Colchester,
Essex CO2 7GZ

tel.: 01206 501785
email: archaeologists@catuk.org

CAT Report 952
May 2016

Contents

1	Summary	1
2	Introduction	1
3	Archaeological background	1
4	Results	2
5	Finds	7
6	Discussion	8
7	Acknowledgements	8
8	References	8
9	Abbreviations and glossary	9
10	Contents of archive	9
11	Archive deposition	9

Figures after p10

List of photographs, tables, maps and figures

Cover: general site shot

Photograph 1	FP1, F1-F2, looking N	3
Photograph 2	FP1, F2-F5, looking W	4
Photograph 3	FP1, F4-F5, looking N	4
Photograph 4	FP2, F6, looking N	4
Photograph 5	FP4, looking W	4
Photograph 6	FP8, looking N	5
Photograph 7	FP11, F8, looking N	6
Photograph 8	FP12, F8, looking N	6
Photograph 9	FP16, F9 and L9, looking N	6
Table 1	Sizes of foundation pads	2
Table 2	Finds by context	7
Map 1	Six-inch 1897 OS map overlaying modern aerial shot of the development site.	8

Fig 1	Site location
Fig 2	Foundation pads
Fig 3	Results: FP1
Fig 4	Results: FP2, FP11, FP16
Fig 5	Results: FP6-FP8, FP13
Fig 6	Representative sections

1 Summary

Archaeological monitoring and recording took place at New Hall School, Boreham, Essex in advance of the construction of a covered play area and school offices in the north quad courtyard. New Hall School is located on the site of a medieval manor and later Tudor palace (Beaulieu) built by Henry VIII in 1517. Part of the palace survives and is still used by the school (Grade I listed, NHLE no. 1000207) with the surviving north wing located immediately to the south of the development site. Five post-medieval brick walls and a brick floor were identified, all probably associated with the Tudor palace. Two walls and the floor dated from the 15th to the early 17th century. One wall was possibly part of a boundary. The other wall and associated floor were probably part of a previously unknown room or set of rooms to the north of the surviving north wing. A third wall dating from the 17th to the early 18th century, along with two other later post-medieval walls, may represent later additions or repairs.

2 Introduction (Fig 1)

This is the archive report for archaeological monitoring and recording at New Hall School, Boreham, Essex which was carried out on 15th-19th February 2016. The work was commissioned by Nigel Floyd, New Hall School Trust, in advance of the construction of a covered play area, school offices and connecting covered walkway, and was undertaken by Colchester Archaeological Trust (CAT).

In response to consultation with Essex County Council Place Services (ECCPS), Historic Environment Advisor Alison Bennett advised that in order to establish the archaeological implications of this application, the applicant should be required to commission a scheme of archaeological investigation in accordance with the *National Planning Policy Framework* (DCLG 2012).

All archaeological work was carried out in accordance with a *Brief for Archaeological Monitoring*, detailing the required archaeological work, written by Alison Bennett (ECCPS 2015), and a Written Scheme of Investigation (WSI) prepared by CAT in response to the brief and agreed with ECCPS (CAT 2016).

In addition to the brief and WSI, all fieldwork and reporting was done in accordance with English Heritage's *Management of Research Projects in the Historic Environment (MoRPHE)* (English Heritage 2006), and with *Standards for field archaeology in the East of England* (EAA 14 and 24). This report mirrors standards and practices contained in the Institute for Archaeologists' *Standard and guidance for archaeological watching brief* (ClfA 2014a) and *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (ClfA 2014b).

3 Archaeological background

The following archaeological background utilises the Essex Historic Environment Record (EHER) held at Essex County Council, County Hall, Chelmsford.

The school is a Grade I listed building (NHLE no. 1000207; EHER 30269) built as a 'palace' for Henry VIII on the site of an earlier medieval manor (EHER 6040-1). New Hall was one of the six manors of Boreham parish granted in 1062 by Earl Howard to the Dean and Secular Canons of the College he founded in Waltham. New Hall became the summer residence of the Lord Abbot in 1177. The Canons moved closer to Waltham in 1350 and New Hall was held by a series of wealthy secular landowners until 1450 when it became Crown property under Henry VI. Henry VIII acquired New Hall from the father of Anne Boleyn in 1517. After considerable rebuilding he renamed it Beaulieu. Part of the palace was demolished in 1737 and the building turned into a more modest residence. This became a nunnery in 1798. Since 1799, the site has been used as a Catholic School and nunnery, there have been numerous extensions

and developments. Modern extensions to the school have uncovered remains of both the medieval manor and Tudor palace (Burgess & Rance (eds) 1988).

The gardens surrounding the school are part of a registered park and garden (Ref:1114). The gardens were improved significantly when the Duke of Buckingham bought the house and employed John Tradescant the Elder to supervise and possibly design the grounds. There are references to the fish ponds (to the east of the development area) from at least 1628 with a later phase of garden activity in the 18th century. Parts of the moats and ponds survive. Some of the outbuildings and walls in the east of the gardens may be as early as 16th/17th century (EHER 8572).

The proposed development site also lies close to an area which contains prehistoric remains. To the north and west are cropmarks of undated and prehistoric enclosures along with other features (EHER 5763, 5796). The Boreham to Springfield Link Main revealed three undated ditches. Along the line of this link Early Neolithic and Late Neolithic/Bronze Age worked flints were found (EHER 47632). To the west and south-west of the school, recent excavations prior to the Countryside Zest development have revealed new archaeological features contemporary with New Hall and the remains of Iron Age settlement (EHER 47635).

CAT undertook an evaluation in 2015 (CAT Report 851) within the easement for a new access road across arable land to the south of the school and north west of the A12 Boreham Interchange. The four trenches revealed no archaeological features or finds.

The north quad courtyard in particular consists of part of the original Tudor palace on the south side, 19th-early 20th century buildings on the east and west sides, and 1960s buildings enclose the remainder of the courtyard on the north and east sides. Ground works carried out here in 2015 for emergency heating repairs uncovered what appear to be a series of in-filled vaulted cellars.

4 Results (Figs 2-6)

Covered walkway (to the west of the north quad)

Ground works for the covered walkway have been postponed and are not part of this report.

Covered play area and offices

A number of the foundation pads for the covered play area and offices were being laid on top of existing modern foundations on the north, east and west sides of the quad. These were not monitored.

A total of sixteen foundation pads (FP1-FP16) were mechanically excavated under archaeological supervision. All of the pads were dug to an approximate depth of 1m below current ground level, or to the top of significant archaeological features where encountered. The sizes of the foundations pads are listed in Table 1.

Foundation Pad Number	Length (m)	Width (m)	Comment
FP1	16.5	0.6	16.5m of trenching represents 3½ sides of a large square
FP2	1.3	0.6	
FP3	1.3	0.6	
FP4	1.3	0.6	
FP5	1.3	0.6	
FP6	1.9	1.3	

FP7	1.3	0.6	
FP8	1.7	0.6	
FP9	1.7	0.6	
FP10	1.7	0.6	
FP11	2.3	0.6	T-shape
FP12	1.6	0.6	L-shape
FP13	1.3	0.6	
FP14	1.3	0.6	
FP15	1.3	0.6	
FP16	1.3	0.6	

Table 1 Size of foundation pad trenches

FP1

FP1 was excavated through modern topsoil (L1, c 350mm thick) onto post-medieval subsoil (L2, c 230-400mm thick). The latest recorded feature was a modern service trench (F5, dug in 2015). Beneath L2, and cut by F5, was a brick wall foundation (F4) which ran the entire length of the east side of the trench. Also sealed by L2 was second brick wall foundation (F3, possibly part of a drainage culvert) and a silty-clay deposit (L3, c 90-100mm thick). Layer L3 sealed a red brick floor laid into compacted clay (F1) and an associated red brick and mortar wall foundation (F2). Wall foundation F2 had been cut by both F3 and F4. All of the features had been cut into natural clay (L4, c 800mm below current ground level). All of the wall foundations and the floor are of post-medieval date, F1 and F2 being earlier in date than F3 and F4.



Photograph 1 FP1, F1-F2, looking N



Photograph 2 FP1, F2-F5, looking W



Photograph 3 FP1, F4-F5, looking N

FP2

FP2 was excavated through modern topsoil (L1, c 350mm thick) onto post-medieval subsoil (L2, c 400mm thick). A large post-medieval brick wall foundation (F6) was identified in the bottom of the trench. It is probably a continuation of F4 from FP1.



Photograph 4 FP2, F6, looking N



Photograph 5 FP4, looking W

FP3

FP3 was excavated through modern topsoil (L1, c 400mm thick) and a post-medieval/modern accumulation horizon (L5, c 450mm) onto natural clay (L4, c 900mm below current ground level).

FP4-FP7

FP4-FP5 were excavated through modern topsoil (L1, c 120-140mm thick) and a compacted layer of modern building debris (L6, c 250mm thick) sealing a post-medieval/modern accumulation horizon (L5, c 440mm thick). Natural clay (L4) was identified at a depth of c 930mm below current ground level. A modern service trench (F7) was recorded running along FP6-FP7.

FP8-FP9

FP8-FP9 was excavated through a modern patio surface (L8, c 180-200mm thick) onto modern building debris (L6, c 300mm deep) and a post-medieval accumulation horizon (L7, c 400mm deep). Beneath L7, natural clay (L4) was identified at a depth of c 900mm below current ground level. Layer L7 may be part of an in-filled watercourse associated with a stream/leat to the north of Dennett House. A modern service trench (F7) was recorded running along both trenches.



Photograph 6 FP8, looking N

FP10-FP15

FP10-FP15 were excavated through modern topsoil (L1, c 120-140mm thick) and a compacted layer of modern building debris (L6, c 250mm thick) sealing a post-medieval/modern accumulation horizon (L5, c 440mm thick). Natural clay (L4) was identified at a depth of c 930mm below current ground level. A modern service trench (F7) was recorded running along FP10 and an electricity trench was recorded in FP13.

A post-medieval brick and mortar wall foundation (F8) was recorded in FP11-FP12, it was sealed by L5 and was possibly part of a boundary wall.



Photograph 7 FP11, F8, looking N



Photograph 8 FP12, F8, looking N

FP16

FP16 was excavated through modern topsoil (L1, c 300mm thick) and a thick layer of backfill/demolition material (L9, c 650mm thick) which sealed natural clay (L4) at a depth of c 950mm below current ground level. Layer L9 sealed a post-medieval/modern brick and mortar wall foundation (F9). The wall foundation was possibly part of a cellar and layer L9 the rubble backfill for this structure.



Photograph 9 FP16, F9 and L9, looking N

5 Finds

A small quantity of finds of post-medieval and modern date was recovered. All of the finds are listed and described by context in Table 2. The pottery fabrics referred to follow the Essex post-Roman fabric series (Cunningham 1982 & CAR 7). There are three individually numbered small finds (SF1-3) also listed in Table 2.

Context Info	Form/ description	Spot date
FP1, L3, Find no.1	SF1 Worked, plain bone disc, counter or gaming piece (diameter 23mm, thickness 3mm, weight 3g)	not closely dated
FP1, L3, Find no.2	SF2 Straight piece from a long bone, slightly oval in section with corresponding oval central bore, broken at both ends smooth surfaces, clearly worked, polished and slightly flattened on one side, possibly slightly also on opposing side/face, appears possibly to be part of a handle for implement with a tang (surviving length 24mm, maximum width 15mm, weight 8g)	not closely dated
FP1, L3, Find no.3	Pottery post-medieval: 4 sherds, 145g; three sherds (2 joining) from a tripod bowl probably a pipkin, greenish-brown glazed interior (Fabric 40), c M/L16-18C; one rim sherd, slightly distorted, probably a misfired second, not glazed, fine fabric (Fabric 40), 16-E17C CBM: Glazed tile piece 30mm thick (178g), surface scorched, cream slip on surface, hard fine sand/silt fabric with few visible inclusions (medieval) Window glass: Single piece of window glass (1g), fire blackened Animal bone: 3 pieces, 28g; rib and longbone fragments, medium size mammal Shell: 2 shells, 81g; 1 oyster shell & 1 cockle shell SF3 Small cylindrical metal container of unknown purpose, sealed? lid, silver-grey coloured metal, silvered surface? hole punctured through lid, but may also be damaged original opening/hole, one side damaged and bent inward slightly. Length 24mm, diameter 14mm, weight <1g. Probably modern.	later 16-17/18C with intrusive modern, or modern
FP1, F4, Find no. 7	Clay pipe: Stem piece with bowl foot (16 g), bore 3 mm, dated c 17C CBM: Half of a brick (107 mm x 50 mm) some edge creases, red coarse sandy fabric, lime mortar on faces except break, probably c L16-E18C	post-med 17-E18C
FP1, F2, Find no.4	CBM: Two whole bricks (sample from wall) both 24.5mm-25mm long, 115mm wide, 50/55mm-60mm thick, red with slightly creased sides, slight lipping (clay ooze squodge mark) on header of one, probably c 15-E17C (Ryan 1996, 95)	post-med 15-E17C?
FP1, F1, Find no.5	CBM: Half of red brick 115 mm x 55 mm similar to F8 (6), squodge mark (clay ooze lip) on header	post-med 15-E17C?
FP10, L5, Find no.8	Pottery modern: Small sherd from a plate/dish (4g) (Fabric 48D) L18/19-E20C CBM: Small abraded piece of thick, flat tile (41g), slightly soft, orange sandy fabric with brown core Glass: One piece (26g) light green glass, 3mm thick, one flat striated surface, other surface slightly undulating, post-medieval Animal bone: 6 pieces, 66g; medium size mammal Shell:	L18/19-E20C

Context Info	Form/ description	Spot date
	Single oyster shell (15g)	
FP11 or FP12, F8, Find no.6	CBM: Half of red brick 115mm x 55mm (similar to F1 (5)); Half of red brick with sunken margins 113/115mm x 55mm	post-med 15-E17C?

Table 2 Finds by context

6 Discussion

The watching brief carried out in the north quad of New Hall School was located immediately to the north of Henry VIII's quadrangular palace, and in particular immediately to the north of the surviving north wing. Five post-medieval brick walls and a brick floor were identified. Unfortunately there are no maps showing structures to the north of the north wing of the Tudor palace, but it is likely that all of these walls and floors are associated with this building. The bricks used to construct wall foundations F1 and F8, and floor F2, date from the 15th to the early 17th century, and are the earliest features identified during groundwork. Features F1 and F2 probably represent the remains of a previously unknown room or set of rooms to the north of the north wing. Wall foundation F8 may also represent similar activity or was possibly part of a boundary wall (school archivist, pers com). Of a slightly later date is wall foundation F4/F6 dating from the 17th to the early 18th century. Wall foundation F3 (which cuts F2) must also be of a later post-medieval date. These may represent later additions and repairs to the palace.



Map 1 Six-inch 1897 OS map overlaying modern aerial shot of the development site. Surviving north wing of the Tudor palace shown hatched with north quad courtyard indicated by the blue arrow.

7 Acknowledgements

CAT thanks Nigel Floyd of New Hall School Trust for commissioning and funding the work. The project was managed by C Lister, fieldwork was carried out by B Holloway. Figures are by E Holloway, C Lister and R Mathieson. The project was monitored for ECCPS by Alison Bennett.

8 References

Note: all CAT reports, except for DBAs, are available online in PDF format at <http://cat.essex.ac.uk>

Brown, D 2007 *Archaeological Archives: A guide to best practice in creation,*

			<i>compilation, transfer and curation</i>
Burgess, E & Rance, M (ds)	1988		Boreham: History, Tales and Memories of an Essex Village
CAR 7	2000		<i>Colchester Archaeological Report 7: Post-Roman pottery from excavations in Colchester, 1971-85</i> , by J Cotter
CAT	2014		<i>Health & Safety Policy</i>
CAT	2016		<i>Written Scheme of Investigation (WSI) for an archaeological monitoring at New Hall School, The Avenue, Boreham, Essex</i>
CAT Report 851	2015		<i>Archaeological trial-trenching evaluation: New Hall School, The Avenue, Boreham, Essex: July 2015.</i>
ClfA	2014a		<i>Standard and Guidance for an archaeological watching brief</i>
ClfA	2014b		<i>Standard and guidance for the collection, documentation, conservation and research of archaeological materials</i>
Cunningham, C	1985		<i>'A typology for post-Roman pottery in Essex' in Cunningham, C & Drury, P Post-medieval sites and their pottery: Moulsham Street, Chelmsford, CBA Research Report 54</i>
DCLG	2012		<i>National Planning Policy Framework</i>
Gurney, D	2003		<i>Standards for field archaeology in the East of England. East Anglian Archaeology Occasional Papers 14 (EAA 14).</i>
ECCPS	2015		<i>Brief for Archaeological Monitoring at New Hall School, The Avenue, Boreham</i> by A Bennett
English Heritage	2006		<i>Management of Research Projects in the Historic Environment (MoRPHE)</i>
Medlycott, M	2011		<i>Research and archaeology revisited: A revised framework for the East of England. East Anglian Archaeology Occasional Papers 24 (EAA 24)</i>
Ryan, P	1996		<i>Brick in Essex, from the Roman conquest to the reformation</i>

9 Abbreviations and glossary

CAT	Colchester Archaeological Trust
ClfA	Chartered Institute for Archaeologists
context	specific location of finds on an archaeological site
ECCPS	Essex County Council Place Services
EHF	Essex Historic Environment Record
feature (F)	an identifiable thing like a pit, a wall, a drain: can contain 'contexts'
layer (L)	distinct or distinguishable deposit of soil
medieval	period from AD 1066 to Henry VIII
modern	period from c AD 1800 to the present
natural	geological deposit undisturbed by human activity
post-medieval	from Henry VIII to c AD 1800
WSI	Written Scheme of Investigation

10 Contents of archive

Finds: one box

Paper and digital record

One A4 document wallet containing:

The report (CAT Report 952)

ECC Evaluation Brief, CAT Written Scheme of Investigation

Original site record (Feature and layer sheets, Finds record, plans)

Site digital photos and log, Architectural plans, Attendance register

11 Archive deposition

The paper and digital archive is currently held by the Colchester Archaeological Trust at Roman Circus House, Roman Circus Walk, Colchester, Essex CO2 7GZ, but will be permanently deposited with Chelmsford Museum under accession code CHMRE: 2016.014

© Colchester Archaeological Trust 2016

Distribution list:

Nigel Floyd, New Hall School Trust
Alison Bennett, Essex County Council Place Services
Essex Historic Environment Record, Essex County Council



Colchester Archaeological Trust

Roman Circus House
Roman Circus Walk,
Colchester,
Essex CO2 7GZ

tel.: 01206 501785

email: archaeologists@catuk.org

Checked by: Howard Brooks

Date: 13.05.2016

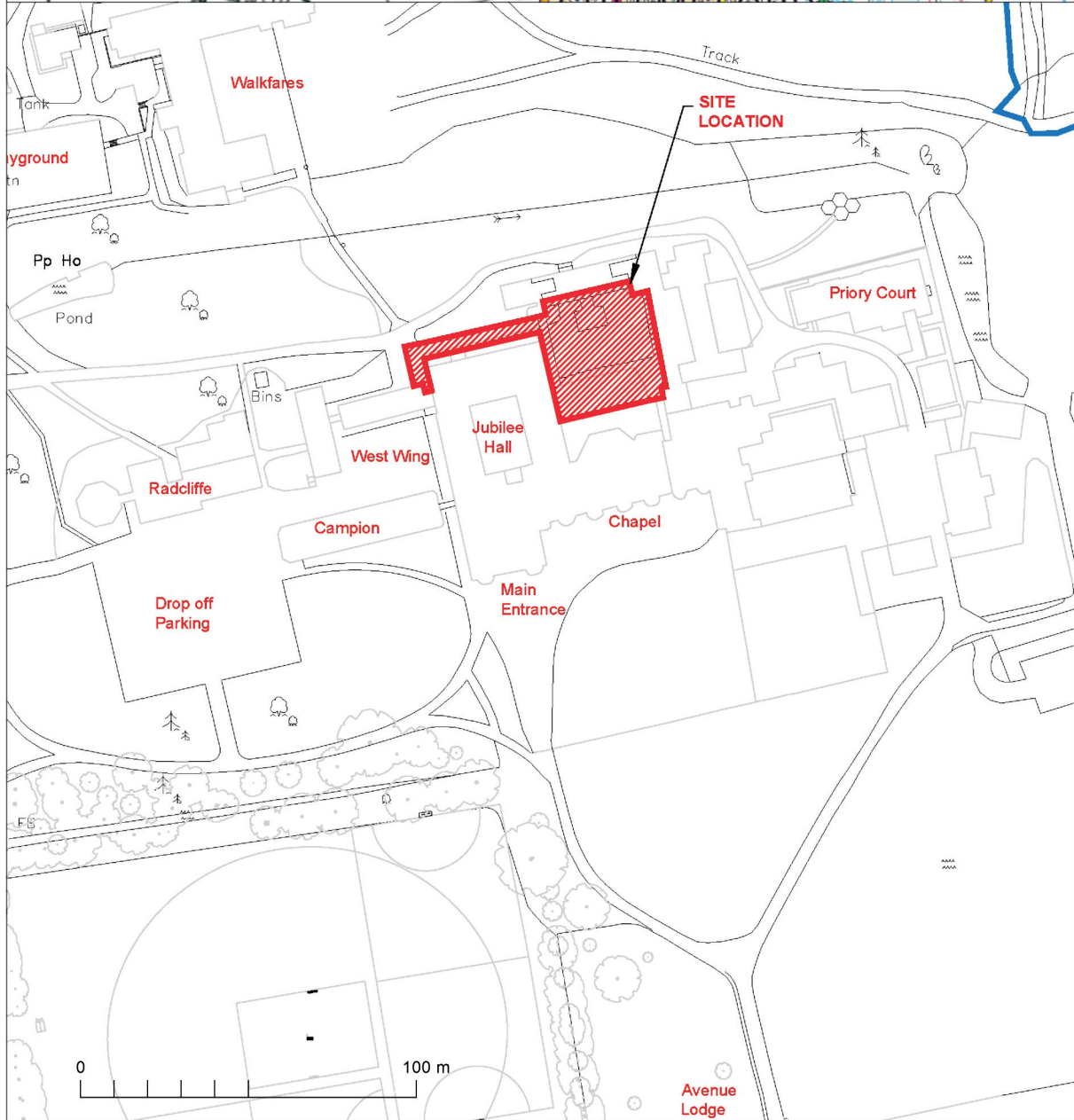
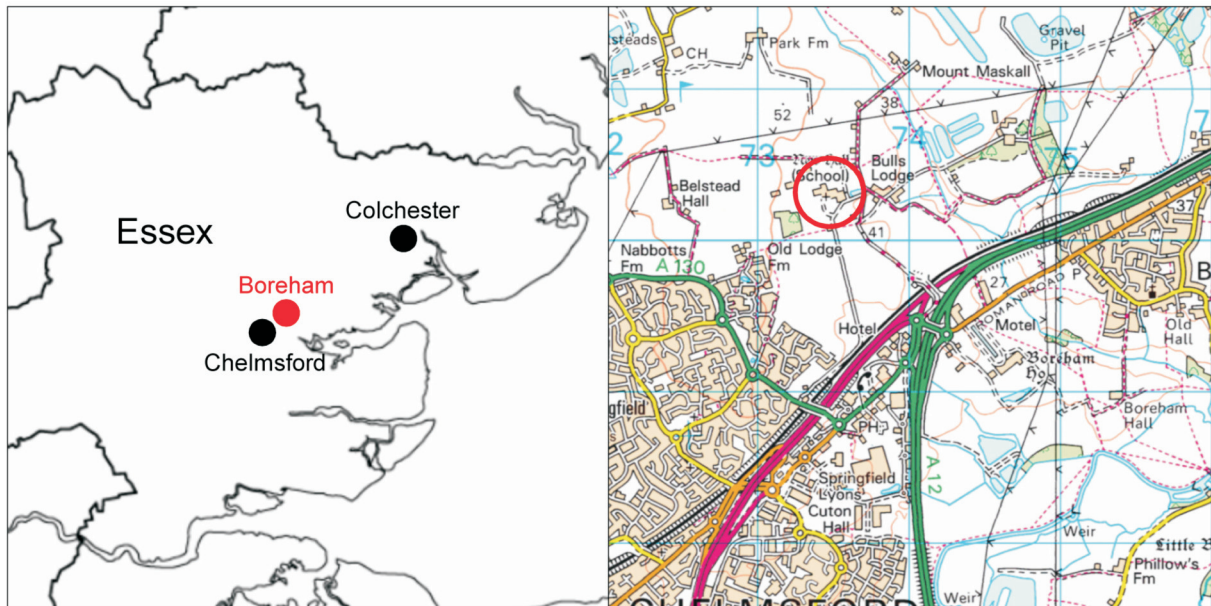
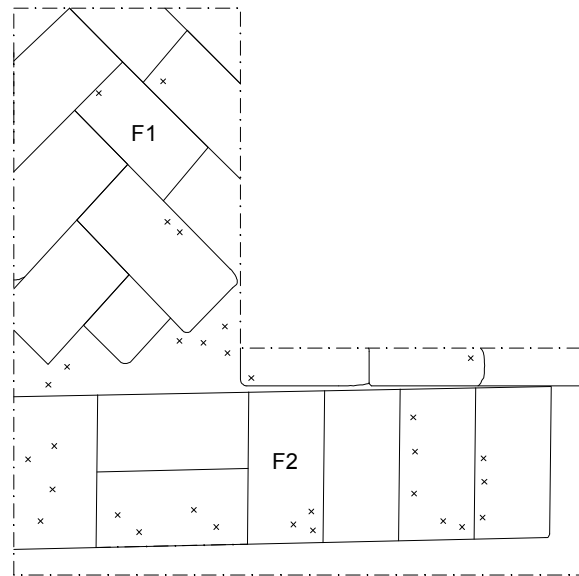


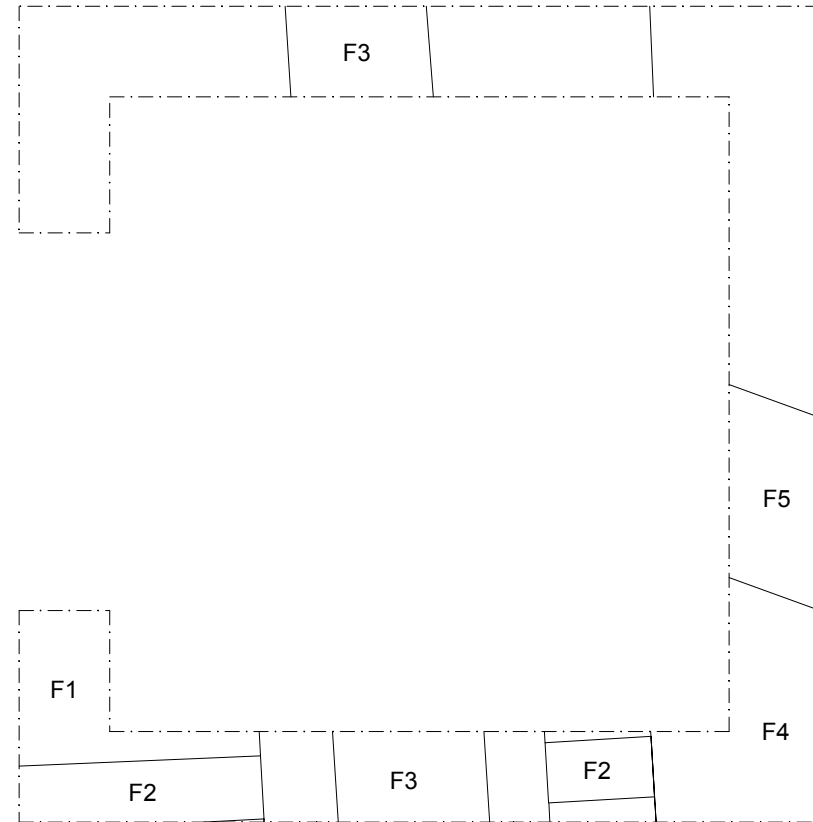
Fig 1 Site location.



Fig 2 Foundation pads (in blue).



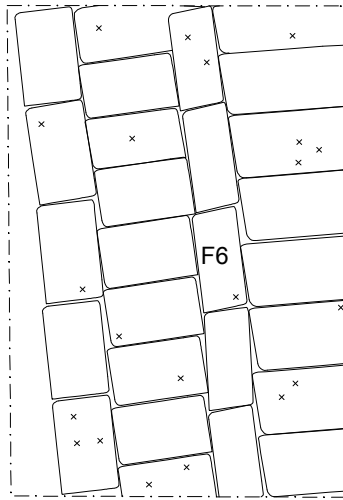
FP1: detail of F1 and F2



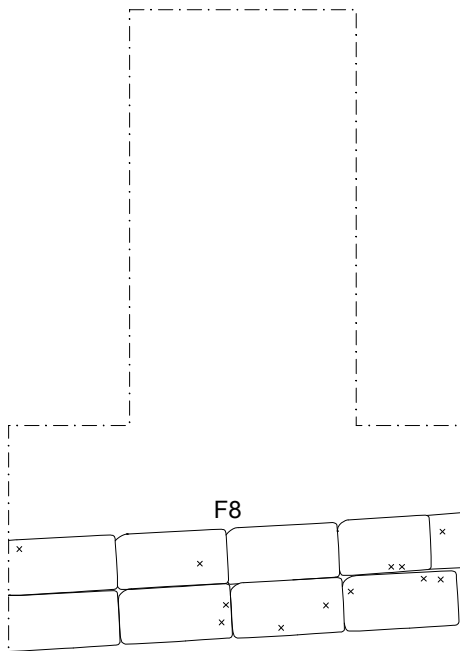
cut for F3



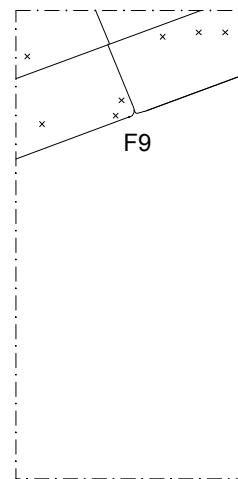
Fig 3 Results:FP1



FP2



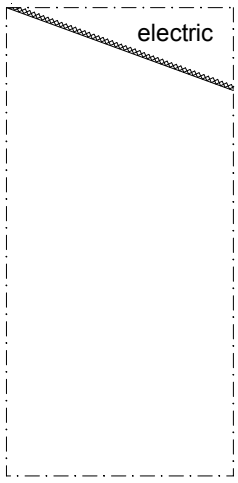
FP11



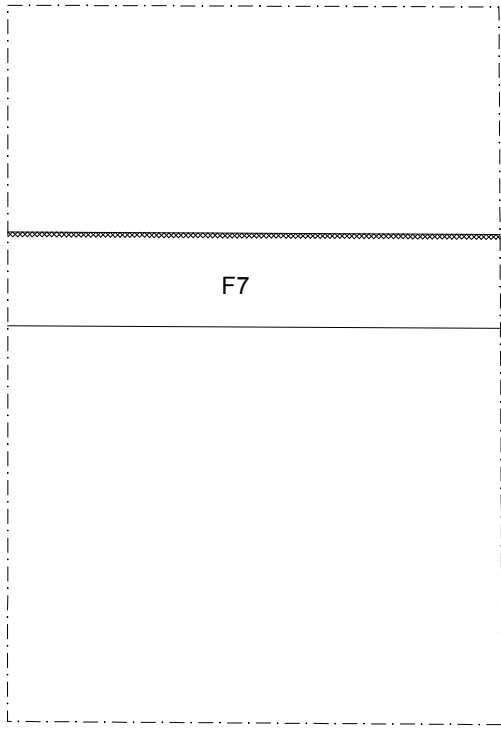
FP16

Fig 4 Results: FP2, FP11, FP16

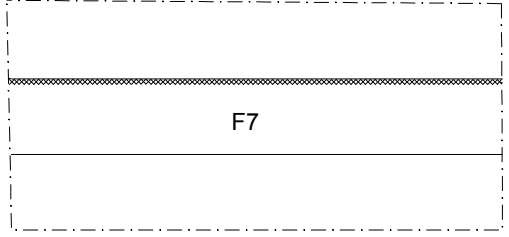




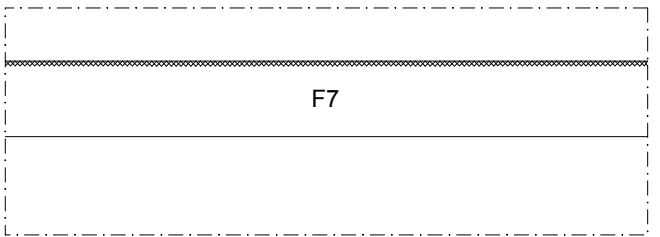
FP13



FP6



FP7



FP8



Fig 5 Results: FP6-8, FP13

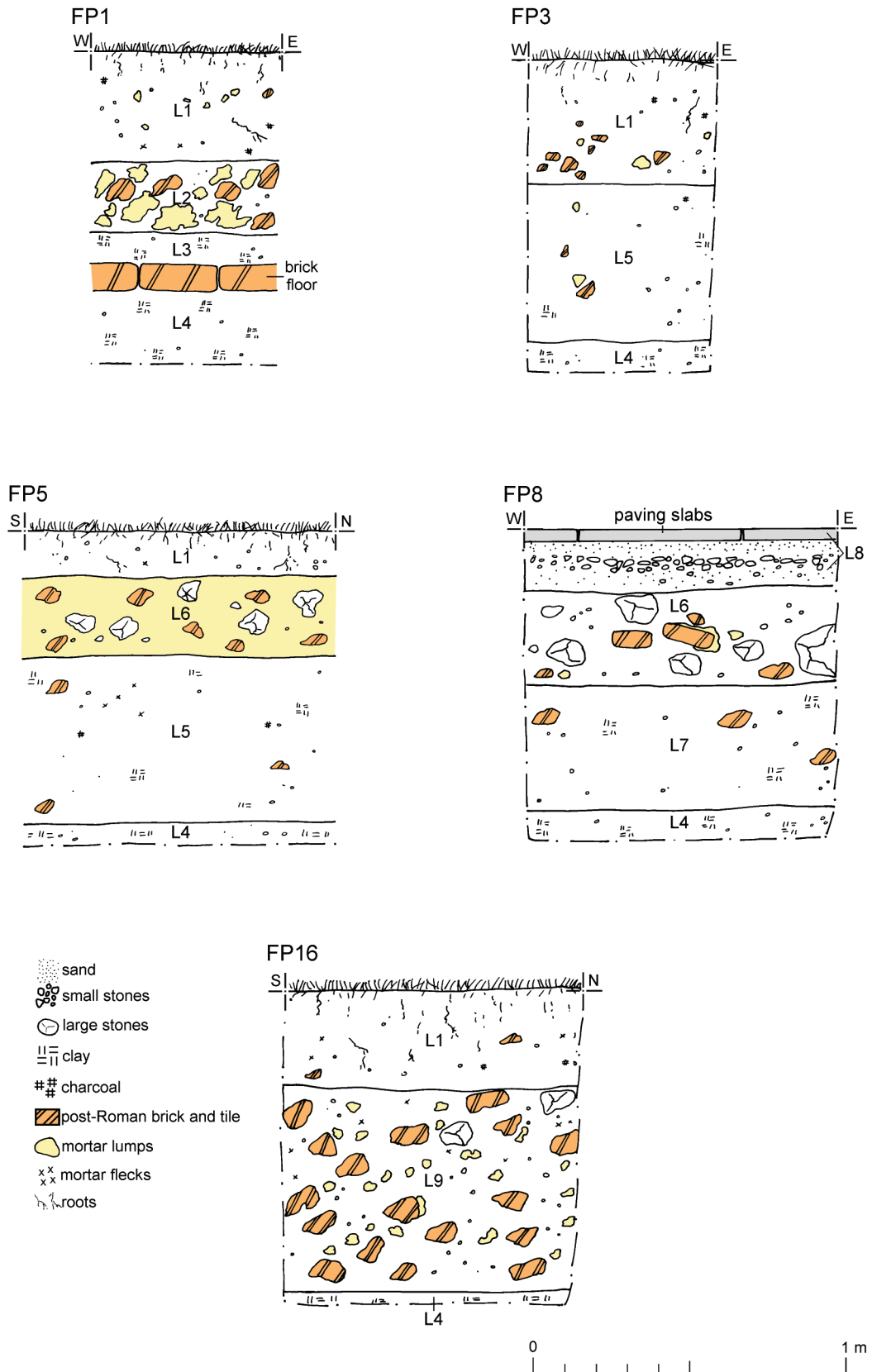


Fig 6 Representative sections.

Essex Historic Environment Record/ Essex Archaeology and History

Summary sheet

Address: New Hall School, The Avenue, Boreham, Chelmsford, Essex, CM3 3HS	
Parish: Boreham	District: Chelmsford
NGR: TL 7343 1038 (centre)	Site code: CAT project code: 16/01b ECC project code: BONHS16 OASIS project ID: colchest3-239904
Type of work: Watching brief	Site director/group: Colchester Archaeological Trust
Date of work: 15th-19th February 2016	Size of area investigated: Sixteen foundation pads totalling 24.79m ²
Location of curating museum: Chelmsford Museum accession code CHMRE: 2016.014	Funding source: New Hall School Trust
Further seasons anticipated? Yes	Related EHER number: EHER 5763, 5796, 6040-1, 8572, 30269, 47632, 47635
Final report: CAT Report 952	
Periods represented: post-medieval	
Summary of fieldwork results: Archaeological monitoring and recording took place at New Hall School, Boreham, Essex in advance of the construction of a covered play area and school offices in the north quad courtyard. New Hall School is located on the site of a medieval manor and later Tudor palace (Beaulieu) built by Henry VIII in 1517. Part of the palace survives and is still used by the school (Grade I listed, NHLE no. 1000207) with the surviving north wing located immediately to the south of the development site. Five post-medieval brick walls and a brick floor were identified, all probably associated with the Tudor palace. Two walls and the floor dated from the 15th to the early 17th century. One wall was possibly part of a boundary. The other wall and associated floor were probably part of a previously unknown room or set of rooms to the north of the surviving north wing. A third wall dating from the 17th to the early 18th century, along with two other later post-medieval walls, may represent later additions or repairs.	
Previous summaries/reports: CAT Report 851	
Keywords: -	Significance: *
Author of summary: Laura Pooley	Date of summary: May 2016