Archaeological evaluation at Writtle Mill, Chelmsford Road, Writtle, Essex, CM1 3ET

June 2016

by Laura Pooley
figures by Chris Lister and Emma Holloway

fieldwork by Ben Holloway, Robin Mathieson and Alec Wade

commissioned by E & M Design
on behalf of Mark Readman

NGR: TL 6867 0611 (centre)
Planning ref.: CHL 16/00086/FUL
CAT project ref.: 16/05j
ECC project code: WRAM16
Chelmsford Museum accession code: CHMRE 2016.085
OASIS ref.: colchest3-252033

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

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

CAT Report 964
June 2016

Contents

List of maps, photographs and figures

Cover: general site shot

1 Summary

An archaeological evaluation was carried out on the site of the former 19th century Writtle watermill, built c *1870 and demolished* c *2000. The watermill was a brick- and tile-built rectangular building, aligned north-east to south-west which was built as an overshot corn mill. Evaluation trenches T2-T3 were located directly on top of the mill and revealed that the foundations of the building had largely survived below ground. Two of the external walls of the mill were uncovered along with the foundations for a raised ground floor, a machinery inspection pit and possibly the pit for the pit-wheel. Trench T1 appears to have been located within the silted-up millstream.*

2 Introduction (Fig 1)

This is the archive report for an archaeological evaluation by trial-trenching at Writtle Mill, Chelmsford Road, Writtle, Essex which was carried out on 2nd June 2016. The work was commissioned by E & M Design, on behalf of Mark Readman, in advance of the construction of a single new dwelling with associated works, 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 Evaluation*, detailing the required archaeological work, written by Alison Bennett (ECCPS 2016), 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 field evaluation* (CIfA 2014a) and *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b).

3 Archaeological background

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

The proposed development is located near the historic settlement area of Writtle, which has its origins in the Late Saxon period.

The EHER shows that the development is on the site of Writtle watermill (EHER 40756). The watermill was built in the 19th century (*c* 1870) as an overshot corn mill which, together with a windmill located a short distance to the north, would have provided a continuous supply of flour, and probably animal feed, to the village (Writtle Parish Council, 2004). Historic maps and photographs shows that the watermill was a rectangular building with the water-wheel housed in its own smaller structure on the north-east end of the building. The mill was aligned north-east to south-west with ancillary structures located further to the north-east. It was built of brick and tile, with a wooden lucam on the north-west facing side. The mill closed around 1957 and the machinery was reported to have been removed *c* 1959. It was used as a contractors store until it was demolished *c* 2000.

The watermill was fed by the River Wid which originally flowed further to the north of its current path. The mill site today has an almost complete but partly silted-up mill water management area encompassing the mill race, overflow and reservoir areas (*ibid*). The remains of the millstream have survived to the west of the site.

Mills along the Chelmer (Large, 1959) provides the following description of the mill before it was demolished:

> *The present mill was originally owned by the Hylands Estate and upon the death of Arthur Prior passed into the hands of the Southgate family in 1920. The mill was built in c.1870 but was damaged during the last war, resulting in the complete rebuilding of the north end and replacement of the roof. All the machinery is original and of iron with wooden cogs. It has a 12ft waterwheel with a 6ft breast and open buckets. The 10ft pit wheel is geared directly to a horizontal shaft running the length of the ground floor. The main shaft carries two more wheels which through wallers drive two pairs of 4ft stones. An additional pulley operates by belts two more pairs of stones on the floor above and ancillary machinery. A fifth pair of stones is driven by an oil engine.*

The Writtle watermill was also reported to have been built on the site of a 'Roman Mill' mentioned in 18th century records and of a Domesday mill under *Writbla*, and foundations of these earlier mills may survive below ground.

Map 1 Six inch OS map, Essex LII, surveyed 1874 and published 1881, watermill indicated by the blue arrow.

Map 2 Six inch OS map, Essex nLIV.SW, revised 1938 and published c 1946, watermill indicated by the blue arrow.

Photograph 1 Writtle watermill, *c* 1920s, looking NW

Photograph 2 Writtle watermill, *c* 1936, looking N
(owned at the time by the Southgate family)

Photograph 3 Writtle watermill, taken sometime after *c* 1936 as the two doors have been bricked-up, looking SE

4 Results (Figs 2-3)

Three trial-trenches were excavated across the footprint of the new dwelling (T2-3) and the associated access road (T1). Each trench was 16m long by 1.8m wide (totalling 86.4m²).

Trench 1 (T1)

Most of trench T1 was excavated to a depth of 800mm below current ground level (bcgl). A small sondage was then excavated at the north-west end of the trench to identify the depth of natural. Two layers were identified. Modern topsoil (L9, *c* 250mm thick) sealed a thick silty deposit of modern made ground (L10, *c* 1.7m thick). Layer L10 sealed natural clay (L8, identified at a depth of 1.95m bcgl). A modern service was located at the south-east end of the trench.

This trench was probably located within the silted-up millstream, represented by thick silt layer L10.

Trench 2 (T2) and 3 (T3)

Most of trenches T2 and T3 were excavated to a depth of 300mm bcgl, to the top of wall foundations F1. A small sondage was excavated at the south-west end of T2 and in the centre of T3 to identify the depth of natural. Seven layers were identified in total. Modern hard-standing (L1, *c* 220-260mm thick) with sub-base (L2, *c* 220-230mm thick) sealed two layers of modern accumulation (L3-L4, *c* 300mm thick) containing fragments of brick, peg-tile and timber (not retained). Layers L3 and L4 were probably associated with the demolition of the mill *c* 2000 and they sealed features F1 and F2. Beneath L4 were layers L5-L7. Buried modern topsoil (L5, *c* 200-210mm thick) sealed two layers of post-medieval/modern accumulation horizons (L6, *c* 310mm thick; L7, c 310mm). Layer L7 sealed natural clay (L8, identified at a depth of 1.56m (T2) and 1.62m (T3) bcgl).

A series of frogged brick wall foundations (F1) and their associated cuts (F2) were identified across both trenches. These features represent the remains of the 19th century Writtle watermill (for detail see below).

Photograph 4 T1, looking SE

Photograph 5 T2-T3, looking SE

Writtle watermill

Frogged brick wall foundations F1 have provided some previously unknown details about the structure of the watermill.

Photograph 6: The south-west facing external wall of the building is represented by the remains of a low plinth wall with two moulded chamfered brick courses. This decorative moulding would originally have stood above ground, indicating that L5 represents ground-level at the time the mill was demolished and all subsequent layers post-date demolition (*c* 2000). The wall measured approximately 0.8m wide.

Photograph 7 (and 5): To the north-east of this external wall were five lines of internal brickwork spaced 6-8.5mm apart with rounded river cobbles laid between them. The lines were 230mm wide, and were made of a single row of bricks laid side-by-side. Representing the remains of raised plinths, this brickwork would have probably supported the ground floor (machinery/spout floor) of the mill. Raising the floor this way would have increased ventilation and prevented the timbers from rotting on what would have been very damp ground.

Photograph 8-9: Beyond the lines of brickwork is a square brick-built foundation measuring 1.5m by 1.5m. This is possibly an inspection pit or shaft for some of the machinery that would have been in operation on the ground floor.

Photograph 10: Beyond the square foundation are two the remains of two further brick wall foundations and a small section of what appears to be a brick pavior (floor). The brick pavior probably also functioned as part of an inspection pit. It is possible that the area between the last two brick walls was the pit for the pit-wheel. If so, this would mean that the north-eastern most brick foundation is the north-east facing external wall, but this can not be confirmed.

The 10ft (3m) water-wheel pit as described by Large was not uncovered during excavation. Historic photographs (Photographs 2-3) appear to show that the wheel was located within its own separate, probably timber, structure located on the north-east side of the mill. So, it should be located further to the north-east of the end of T2.

Photograph 11-12: Also identified in T3 was part of the south-east facing external wall of the mill. The remains of the lower moulded chamfered brick course have survived in this section, but the upper course has been damaged.

Although not all of the watermill was revealed during evaluation the brick-built mill probably measured around 13.5m long, with an additional 3m wide water-wheel pit/structure added onto the north-east facing side of the mill.

Photograph 6 South-west facing external wall of mill showing low plinth wall with two moulded chamfered brick courses, looking NE

Photograph 7 Lines of frogged brickwork representing the remains of plinths used to support a raised floor, looking NE

Photograph 8 Square brick-built foundation, possibly an inspection pit, looking NE

Photograph 9 Square brick-built foundation, possibly an inspection pit, looking NE

Photograph 10 Wall foundations and brick pavior at the far NE end of the trench, possibly including the pit for the pit-wheel in the foreground, looking SW

Photograph 11 South-east facing external wall of mill showing low plinth wall with lower moulded chamfered brick course, looking NW

Photograph 12 South-east facing external wall of mill with brick plinths beyond and representative section from ground level to natural, looking W

5 Finds

A single brick from the foundation wall of the mill was retained for identification (finds number 2). It was a frogged 'soft red' brick measuring 230mm by 112mm by 68mm (19th century). A single chamfered brick was also retained (finds number 2). It was also a 'soft-red' measuring 230mm by 112mm by 68mm, but with a 45° angle on one face.

Photograph 13 Chamfered brick

Two fragments of millstone were recovered from modern demolition layer L2 (finds number 3). The fragments measured 300mm by 240mm by 100mm and 250mm by 240mm by 70mm. Both are dressed with three furrows evident on the larger piece and two on the smaller. The stone appears to be French burrstone (identified by Stephen Benfield), used for finer grinding. This stone is not cut from one piece but built up from sections of quartz cemented together with plaster and bound with iron bands. French burr comes from the Marne Valley in northern France.

Photograph 14 Millstone fragments

A complete 19th century glass jar lid was recovered from foundation cut F2 (finds number 1).

6 Discussion

The evaluation on the site of Writtle watermill has revealed that the foundations of the 19th century mill have survived below ground and are centred on trench T2. This has provided some previously unknown details about the structure of the mill. The south-east and south-west facing walls had decorative moulded brick courses. The ground floor was raised on brick plinths to raise it above the damp and allow for ventilation. An inspection pit and possible pit for the pit-wheel were identified at the north-east end, making the building approximately 13.5m long. The identification of two fragments of French burrstone suggest that the mill was using an expensive stone to make a very high quality product (a fine grade white flour). Finally, silt layer L10 in T1 probably represents the silted-up millstream. Unfortunately, the north-east and north-west facing walls were not identified in the evaluation trenches and neither was the wheel-pit. No trace of any earlier mill was identified.

7 Acknowledgements

CAT thanks E & M Design and Mark Readman for commissioning and funding the work. The project was managed by C Lister, fieldwork was carried out by B Holloway, R Mathieson and A Wade. Figures are by CL and E Holloway. 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

CAT	2014	*Health and Safety Policy*
CAT	2015	*Written Scheme of Investigation (WSI) for archaeological evaluation at Writtle Mill, Chelmsford Road, Writtle, Essex, CM1 3ET*
CIfA	2014a	*Standard and guidance for archaeological field evaluation*
CIfA	2014b	*Standard and guidance for the collection, documentation, conservation and research of archaeological materials*
DCLG	2012	*National Planning Policy Framework.* Dept of Communities and Local Government.
EAA **14**	2003	*Standards for field archaeology in the East of England*, East Anglian Archaeology, Occasional Papers, **14**. Ed. D Gurney
EAA **24**	2011	*Research and archaeology revisited: A revised framework for the East of England*, East Anglian Archaeology Occasional Papers **24**, by Maria Medlycott
ECCPS	2015	*Brief for archaeological evaluation at Writtle Mill, Chelmsford Road, Writtle*, by Alison Bennett
English Heritage	2006	*Management of Research Projects in the Historic Environment* (English Heritage)
Large, E	1959	*Mills along the Chelmer*
Writtle Parish Council	2004	*Writtle Village Design Statement*

9 Abbreviations and glossary

CAT	Colchester Archaeological Trust
CIfA	Chartered Institute for Archaeologists
context	specific location of finds on an archaeological site
corn mill	for grinding cereal grain into flour for human consumption and animal feeds
chamfer	the splayed face resulting from the removal of the angle along a piece of timber or brick
ECCPS	Essex County Council Place Services
EHER	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
lucam	a projecting dormer for external hoisting
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
watermill	mill located on a waterway and employing a vertical waterwheel on a horizontal shaft to drive machinery inside a fixed building
WSI	Written Scheme of Investigation

10 Contents of archive

Finds: large box

Paper and digital record

One A4 document wallet containing:
The report (CAT Report 964)
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, Risk assessment

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: 2016.085

Distribution list:
E & M Design
Mark Readman
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: 09.06.2016

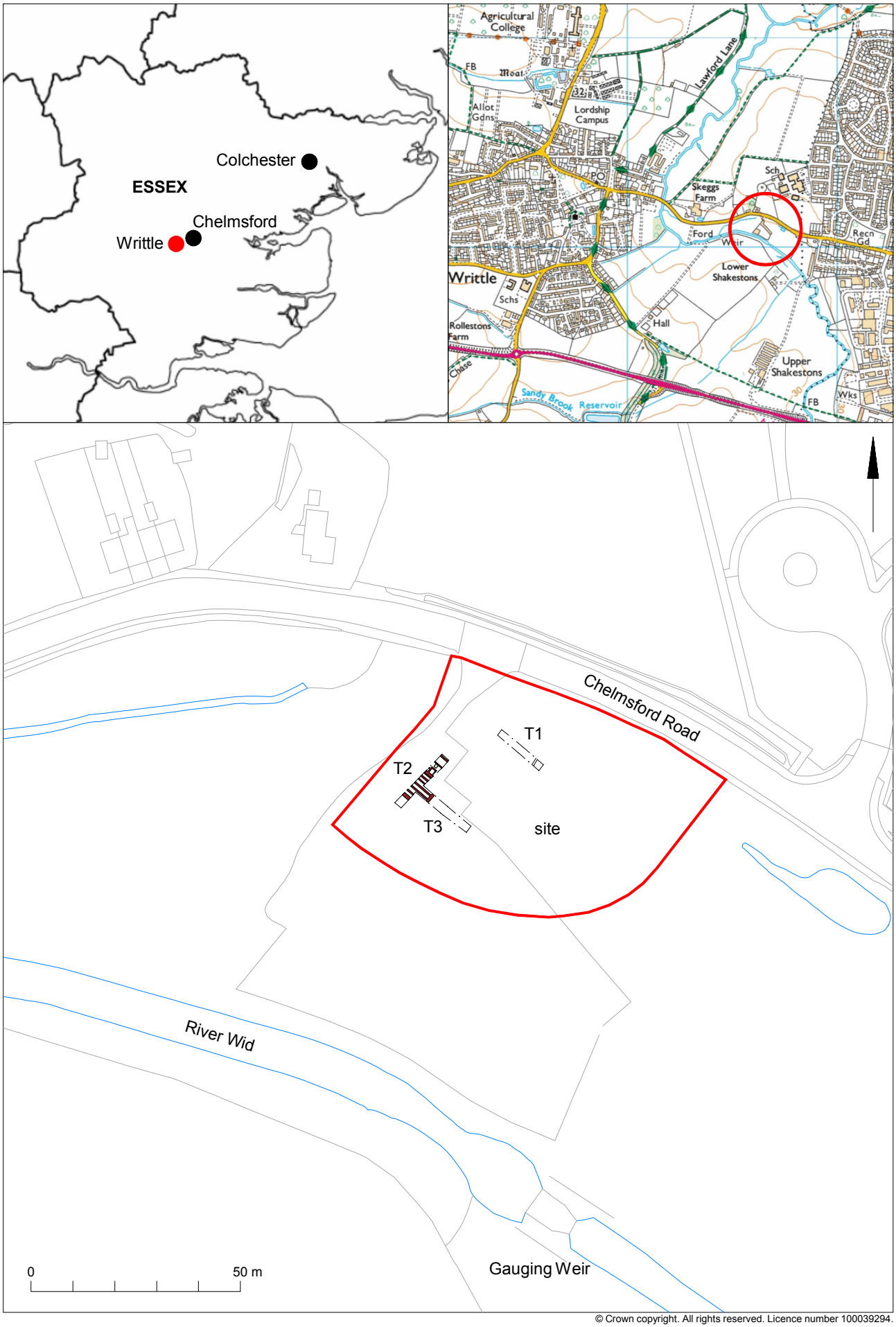

Fig 1 Site location.

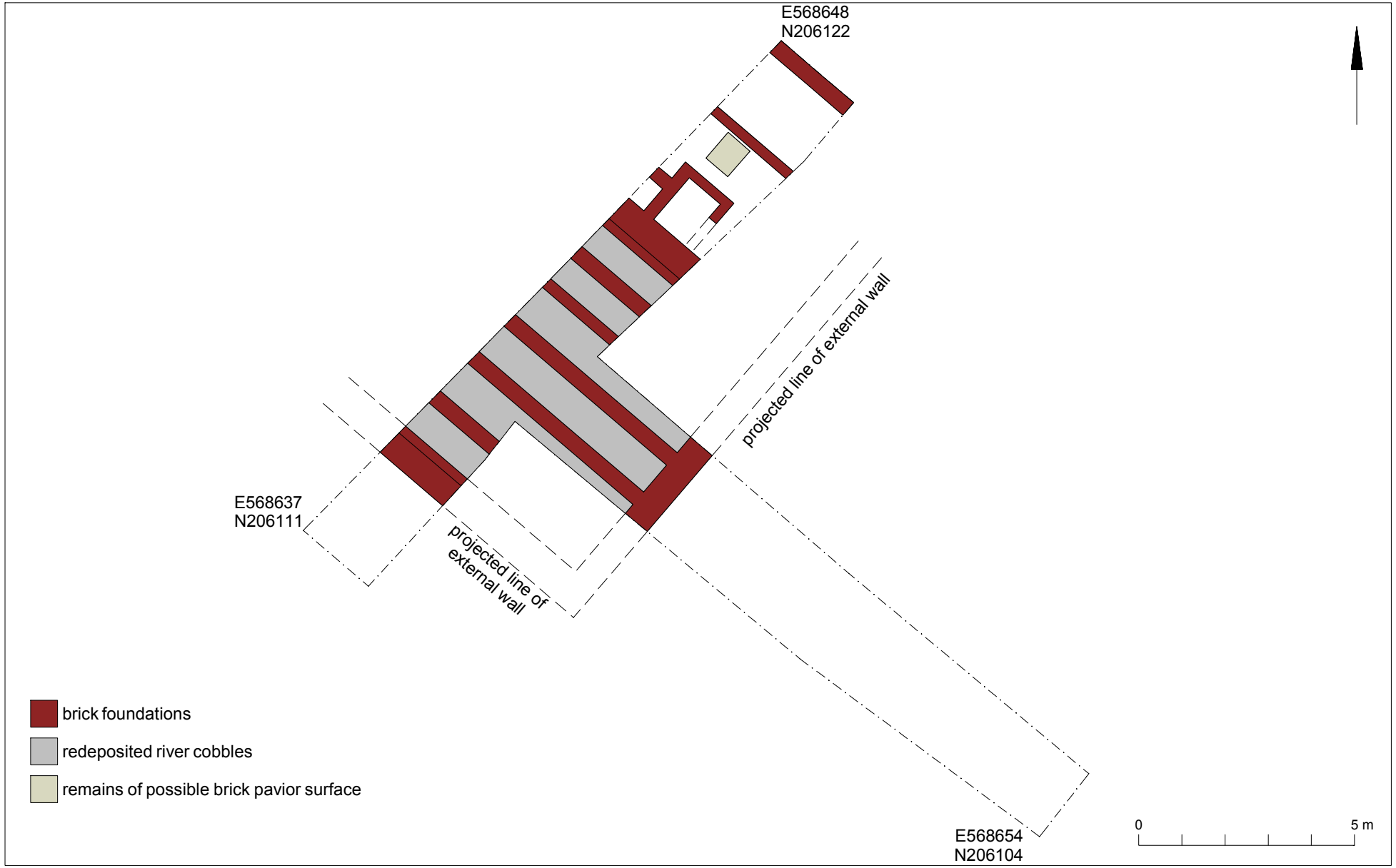

Fig 2 Results.

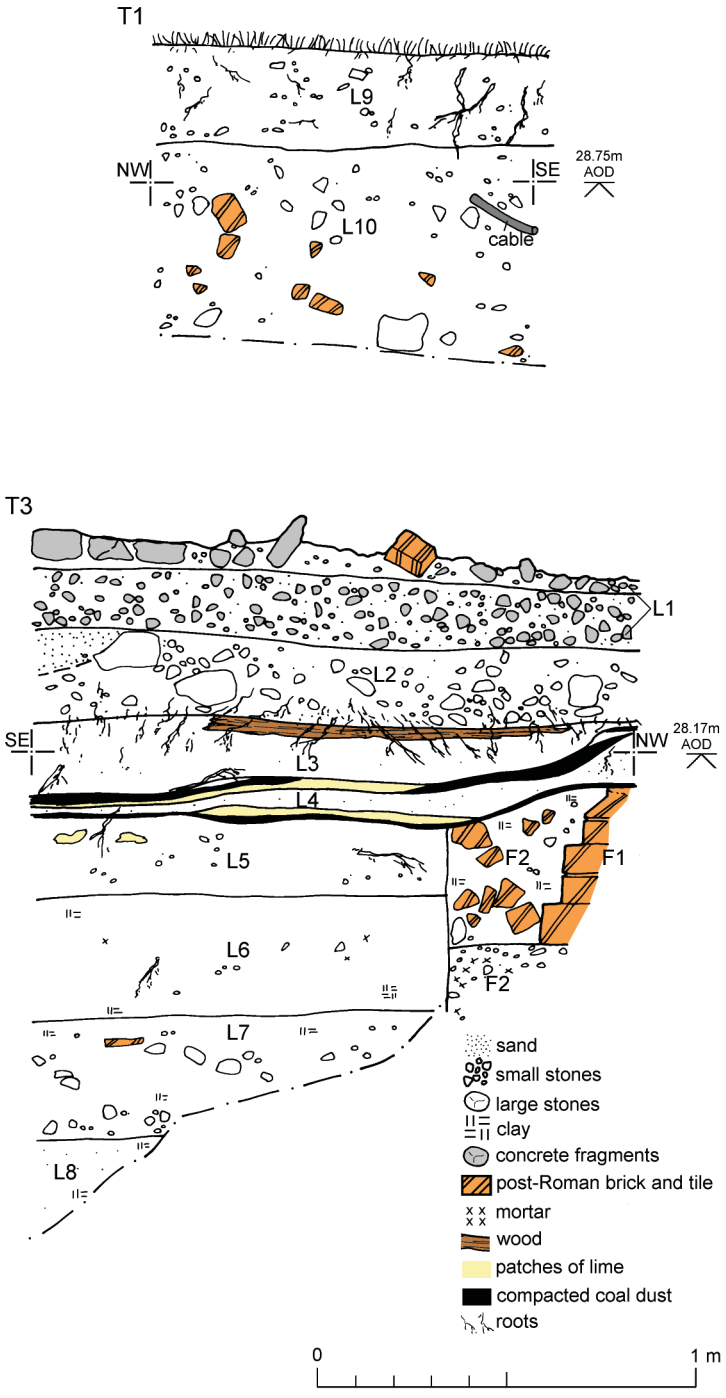

Fig 3 T1 and T3: Representative trench sections.

Essex Historic Environment Record/
Essex Archaeology and History

Summary sheet

Address: Writtle Mill, Chelmsford Road, Writtle, Essex, CM1 3ET	
Parish: Writtle	***District:*** Chelmsford
NGR: TL 6867 0611 (centre)	***Site code:*** CAT project code: 16/05j ECC project code: WRAM16 OASIS project ID: colchest3-252033
Type of work: Evaluation	***Site director/group:*** Colchester Archaeological Trust
Date of work: 2nd June 2016	***Size of area investigated:*** Three trenches each measuring 16m long by 1.8m wide (68.4m²)
Location of curating museum: Chelmsford Museum accession code CHMRE: 2016.085	**Funding source:** Owner
Further seasons anticipated? No	***Related EHER number:*** EHER 40756
Final report: CAT Report 964	
Periods represented: modern	
Summary of fieldwork results: *An archaeological evaluation was carried out on the site of the former 19th century Writtle watermill, built* c *1870 and demolished* c *2000. The watermill was a brick- and tile-built rectangular building, aligned north-east to south-west which was built as an overshot corn mill. Evaluation trenches T2-T3 were located directly on top of the mill and revealed that the foundations of the building had largely survived below ground. Two of the external walls of the mill were uncovered along with the foundations for a raised ground floor, a machinery inspection pit and possibly the pit for the pit-wheel. Trench T1 appears to have been located within the silted-up millstream.*	
Previous summaries/reports: -	
Keywords: watermill	***Significance:*** *
Author of summary: Laura Pooley	***Date of summary:*** June 2016