

Blackley Quarry, Essex: Extension Phase 3 and 4

An Archaeological Evaluation



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An Archaeological Evaluation

commissioned by
Clover Planning on behalf of Blackley Quarry

April 2019

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Report No. 1419

Approved by **Emma Beadsmoore**

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Summary

A total of 520m of archaeological trial trenching was undertaken over an area of 2.7ha at Blackley Quarry, Great Leighs, Essex. The work was carried out in order to evaluate land ahead of extension of the quarry (Phases 3 and 4). The investigated area showed evidence of the post-Medieval arable land use recorded in Phases 1 and 2. The area was devoid of earlier archaeological features or deposits.

INTRODUCTION

Following a request from the Essex County council Historical Environment Team (Bennett 2018), the Cambridge Archaeological Unit (CAU) was commissioned by Blackley Quarry to undertake an archaeological evaluation in an area of 2.7ha proposed for the quarry's eastern extension Phases 3 and 4 (Figure 1). Following a Written Scheme of Investigation (Beadsmoore 2019), the evaluation was carried out over four days (18-21st March 2019) in order to assess the significance and quality of the archaeological remains liable to be impacted upon by the proposed quarry development.

The evaluation uncovered a small number of undated, post-Medieval and modern features which relate to the findings of previous investigations (Brittain 2016) and aerial photographic evidence. Evidence of earlier archaeological activity was absent from the proposed development area (PDA). The site code was DYBQ19.

Location, geology and topography

The PDA at Blackley Quarry is located to the north of the Chelmsford Racecourse, between the villages of Great Leighs and Great Notley, (centred on TL 733 194) (Figure 1). The site, currently used as agricultural land, slopes gently from 76 to 72 AOD with an underlying geology of London Clay Formation comprising clay, silt and sand with overlaying superficial deposits of Lowestoft Formation outwash sands and gravels (www.bgs.ac.uk/geoindex accessed 26.3.2019).

Archaeological background

The PDA is part of a landscape of known archaeological activity, which was extensively detailed in a Desk Based Assessment by the CAU (Brittain 2014) and will consequently only be summarised here. Evidence for prehistoric activity in the area comes from fieldwalking in Great Notley and Great Leighs (EHER 14603, 14605, 14606, 14607, 14611, 14614, 14580, 17938, 14579), which revealed Mesolithic, Late Neolithic/Early Bronze Age, Bronze Age flint and Late Bronze Age/Early Iron Age pottery. Prehistoric activity seems to be most intense 2-3km to the west and southwest of the PDA along the River Ter, where cropmarks showed possible prehistoric features (EHER 6155, 9852, 9853, 13964, 13959, 6163, 6154, 8923) and where a Bronze Age cup was found (EHER 5960). The cropmarks of a ring ditch (EHER 6530) and a potential burnt flint mound (EHER 9984) were also 1-2km to the northeast of the PDA. Late Iron Age evidence is provided by a Late 1st century BC copper alloy brooch found in Great Notley (EHER 18247), ten gold coins staters on the outskirts of Great Leighs (EHER 18644), and 3km to the west of potential Iron Age/Roman enclosures (EHER 6155, 9852). Evidence of Roman activity in the area includes the projected course of the Roman road, which links settlements at Chelmsford and Braintree and followed a north-south course 0.3km to the southeast of the PDA (EHER 6057, 6502). A Roman coin from the 2nd century AD was found in Great Notley (EHER 45450) and Roman pottery 0.5km

northeast of the PDA (EHER 14581). Significant Medieval sites known in the area comprise a medieval moated site 2km to the south of the PDA (EHER 5961), a priory founded at the start of the 13th century to the west along the River Ter (EHER 5956) as well as other occasional features 2-3km to the south and southwest of the PDA (EHER 45165, 6061).

Previous Archaeological Work

Trial trenching carried out 0.5km northeast of the PDA along the path of the A131 Great Leighs Bypass did not reveal any evidence of significant archaeological activity of any period (Brittain 2014). Moreover, in 2016, an archaeological evaluation of Phases 1 and 2, immediately southwest of the PDA, was undertaken by the CAU (Brittain 2016) and uncovered limited archaeological remains comprising post-Medieval and undated ditches and an infilled pond and trackway; no earlier features or deposits were encountered.

Methodology

Thirteen trial trenches totalling 520m were opened (Figure 1) by a 360° tracked excavator fitted with a 2m-wide toothless ditching bucket under the supervision of an experienced archaeologist. Trenches and the outline of the PDA were surveyed into the Ordnance Survey (OS) grid and a contour survey was undertaken using a Global Positioning System (GPS). Each trench was accompanied by a recording sheet onto which deposit profiles and geological variances were recorded as well as a plan of all archaeological features to a scale of 1:100. All potential archaeological features were excavated. A written record of archaeological features and soil sequences was created using the CAU recording system (see below) A digital photographic record of the trenching programme was also maintained. The spoil heap for each trench was scanned by a metal detector, with finds being collected and recorded by trench number (Table.1).

The CAU recording system is an adaptation of the MoLAS system (Spence *et al.*) designed to be more appropriate to 'extensive' rural settings and to facilitate effective organisation of stratigraphic data and finds plotting. The system uses the Feature (ditch, pit, posthole etc.) as the main interpreted entity. Each feature is assigned an individual number with a context group number (eg. 100) also being assigned to each individual slot excavated in that feature; context numbers are derived from this context group number (eg. 100.01, 100.02 ect.).The context sheet forms the basis of the written archive but can be supplemented by Feature sheets (for complex features) as well as 'specialist' sheets such as skeleton and timber sheets. All sections are drawn at a scale of 1:10 or 1:20 as appropriate.

The work was carried out in full accordance with the CIFA's *Standard Guidance for Archaeological Field Evaluations*.

RESULTS

Metal Detector Survey

Metal objects collected during the metal-detecting of the trenches' spoil heaps were all post-Medieval, with a couple of objects dated more specifically to the 17-18th century (Table.1).

In addition, a single metal item, the base of a shotgun shell (3g), was recovered from modern ditch F.6.

Trench No.	Find	Date	Weight (g)
1	Fe lump	Post-Medieval	2
	Fe nail	Post-Medieval	9
2	Fe strip	Post-Medieval	11
3	Cu Alloy button	17-18 th c.	5
	Fe nail	Post-Medieval	40
4	Fe nail	Post-Medieval	10
5	Fe nail	17-18 th c.	9
6	Fe sheet	Post-Medieval	26
7	Possible Fe Knife	Post-Medieval	18
8	Fe nail	17-18 th c.	9
9	Fe winding key	Post-Medieval	19
	Fe nail	Post-Medieval	3
10	Fe Sheet	Post-Medieval	40
11	Fe nail	Post-Medieval	2
12	Fe nail	Post-Medieval	3
	Fe nail	Post-Medieval	6
	Fe nail	Post-Medieval	8
	Fe nail	Post-Medieval	10
	Fe nail	Post-Medieval	17
13	Fe sheet	Post-Medieval	23

Table 1: Metal detecting survey results by trenches.

Trenching

Most features were encountered in the centre of the PDA, whilst the south and the north areas each revealed only one feature (Feature 2). The geology of the PDA comprised a clayey coarse sandy gravel becoming more clayey as the site slopes down. The trenches in the north area, and in the north end of Trench 7, had a subsoil horizon varying from 0.08 to 0.20m thick, which disappeared toward the central and southern areas of site. The south, centre and north areas are described separately below.

South Area (Trenches 1-3)

No archaeology was observed in either Trench 2 or 3; a shallow ditch F.7 was excavated in the southern end of Trench 1. Ditch F.7, measured 1.24m wide and 0.30m deep and was oriented northeast-southwest, finds were limited to a single post-Medieval brick (Figure 6). Ditch F.7 seemed to correspond to a similar ditch from Phases 1 and 2 which was also dated to as post-Medieval (Figure 7) (Brittain 2016).

Central Area (Trenches 4-9)

Comprising Trenches 4-9, the central area had the most recorded archaeology. Three features were encountered in Trenches 5, 7 and 8. Ditch F.2 was visible in both the western part of Trench 8 and in the northern part of Trench 7. Aligned northeast-southwest, the ditch (1.52-1.75m wide by 0.45-0.49m deep) had moderately sloping sides and a lightly concave base and did not produce any finds (Figure 4).

Recorded in both Trenches 7 and 5, ditch F.4 seems to follow an anomaly visible from the cropmarks (Figure 7). The ditch, running east-west, measured 2.46-2.58m wide and 0.66-0.94m deep, and had gradually sloping sides tapering towards a rounded base (Figure 5). Once again, no finds were recovered.

Ditch F.6 at the northern end of Trench 5 was orientated northeast-southwest, and corresponds to an anomaly observable as cropmarks (Figure 7). Also recorded in Phases 1 and 2, the fill of the ditch is dated to the 20th century due to the shotgun shell found in it.

North Area (Trenches 10-13)

The north area, which comprises Trenches 10-13 was devoid of archaeology with the exception of ditch F.1 in Trench 12. Ditch F.1 was orientated northwest-southeast in the eastern end of Trench 12 and measured 1.28m wide and 0.38m deep (Figure 3). No finds were recovered.

DISCUSSION

The results from Blackley Quarry Phases 3 and 4 correspond with those from previous archaeological investigations and the wider landscape of the PDA. Fieldwalking surveys and trial trenching in the immediate area have so far showed an absence of significant prehistoric archaeology. Prehistoric occupation seems to have been centred on the areas around the villages of Great Notley and Great Leighs and towards the River Ter, west and southwest of the PDA. Likewise, although the course of a Roman road runs southeast of the PDA, no significant Roman occupation was discovered away from the settlements at Great Notley and Great Leighs. The lack of previous archaeological evidence from the PDA could indicate that the land was left as woodland or common land from an early period.

A 1777 map of Essex shows the area of Phases 1 and 2 as woodland at that time whereas Phases 3 and 4 were farmed (Figure 8). It is probable that the area of Phases 3 and 4 were originally woodland, subsequently converted to farmland. Ditch F.6, running northeast-southwest, corresponds to a field boundary visible in an ordnance survey map from 1880, which dates the ditch, at the latest, to the end of the 19th century (Figure 9). The boundary disappears between 1950 and 1970 when it was probably backfilled (Figure 10). Ditch F.4, corresponding to the anomaly running northwest-southeast and visible from cropmarks (Figure 7), remains undated but presumably is earlier than 19th century as it is not on historical maps. Continuation of arable land use is likely to be encountered in the next phases of quarry expansion.

Acknowledgements

The work was commissioned by Clover Planning on behalf of Blackley Quarry. We are grateful to quarry team, Tony Pearman, for their help throughout the project. The CAU project manager was Emma Beadsmoore. The fieldwork was carried out by Clara Schonfeld with the assistance of David Moger. Site survey was undertaken by Jane Matthews and Jonathan Moller, and the report graphics were produced by Bryan Crossan.

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APPENDIX 1

Trench Descriptions

Trench No.	Orientation	Length (m)	Max. Depth (m)	Max. Topsoil Depth (m)	Max. Subsoil Depth (m)	Notes
1	N – S	58	0.34	0.29	0	F.7 post-Medieval ditch.
2	E – W	39.2	0.4	0.3	0	No archaeology.
3	E – W	50	0.38	0.32	0	No archaeology.
4	N – S	19.2	0.34	0.29	0	No archaeology.
5	N – S	50	0.39	0.31	0	F.4 ditch undated; F.6 post-Medieval ditch.
6	E – W	59	0.39	0.29	0	No archaeology; one land drain.
7	N – S	49.1	0.51	0.31	0.08	F.2 ditch undated; F.4 ditch undated; one land drain.
8	E – W	39	0.51	0.35	0	F.2 ditch undated; one land drain.
9	E – W	19.8	0.34	0.3	0	No archaeology; one land drain.
10	N – S	49	0.48	0.32	0.18	No archaeology; four land drains.
11	E – W	20.4	0.44	0.35	0.17	No archaeology.
12	E – W	43.8	0.42	0.31	0.12	F.1 ditch undated.
13	N – S	22.8	0.56	0.31	0.20	No archaeology.

APPENDIX 2

Feature/Context List

Feature No.	Trench No.	Feature Type	Context No.	Context Type	Context Description	Length (m)	Width (m)	Depth (m)	Finds
1	12	Ditch	1.1	Fill	Mid-light brown silty clay; occ. small-med stones, freq. sm. iron stones	1 (slot)	1.28	0.38	None
			1.2	Cut					
2	8	Ditch	2.1	Fill	Mid brown clayey silt; frequent small stones; occ. small iron stones				None
			2.2	Fill	Mid orange brown silty clay; occ. small stones; rare small iron stones				
			2.3	Cut		1 (slot)	1.52	0.45	
	7	Ditch	3.1	Fill	Mid brown clayey silt; frequent small stones; occ. small iron stones				None
			3.2	Fill	Mid orange brown silty clay; occ. small stones; rare small iron stones				
			3.3	Cut		1 (slot)	1.75	0.49	
4	7	Ditch	4.1	Fill	Mid-Light brown slightly clayey sandy silt; rare large stones.; occ. s-m st.	1 (slot)	2.58	0.94	None
			4.2	Cut					
	5	Ditch	5.1	Fill	Mid brown clayey silt; rare large stones; occ. small stones and iron stones	1 (slot)	2.46	0.66	None
			5.2	Cut					
6	5	Ditch	6.1	Fill	Mid brown grey clayey silt; frequent charcoal; occasional s-m stones				Shotgun shell
			6.2	Fill	Mid-light brown slightly silty clay; rare small charcoal; occ. s-m stones				
			6.3	Cut		1 (slot)	1.26	0.54	
7	1	Ditch	7.1	Fill	Mid-light brown silty clay; occ. s. st.; rare s. iron st.; occ. Fe oxide flecks	1 (slot)	1.24	0.3	CBM
			7.2	Cut					

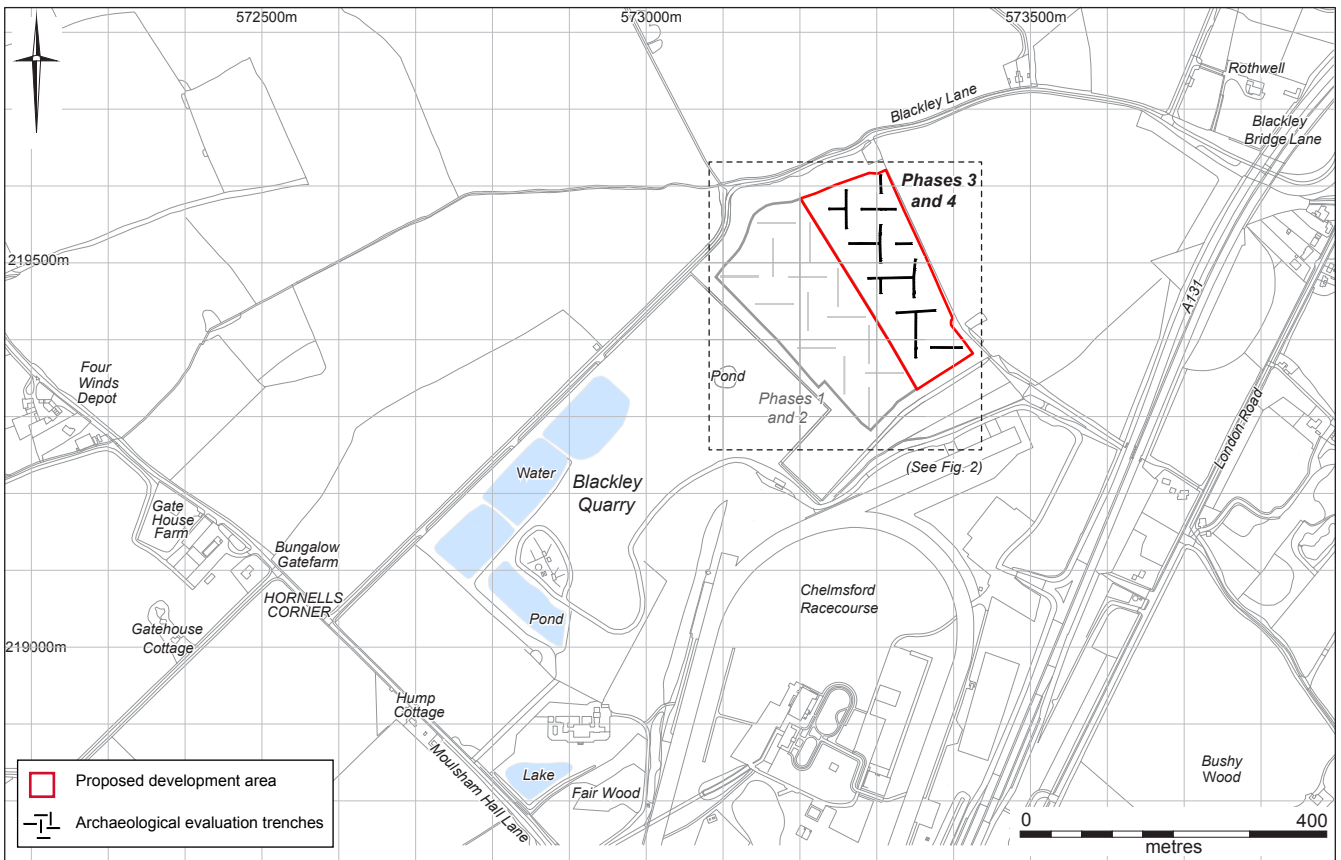
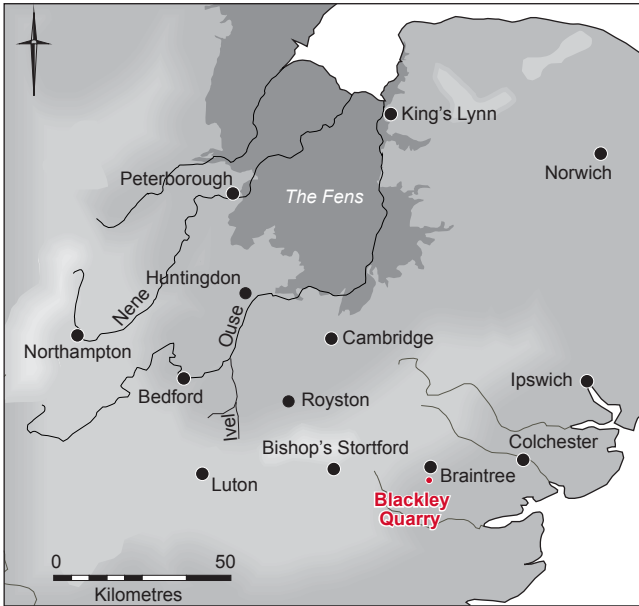


Figure 1. Location plan

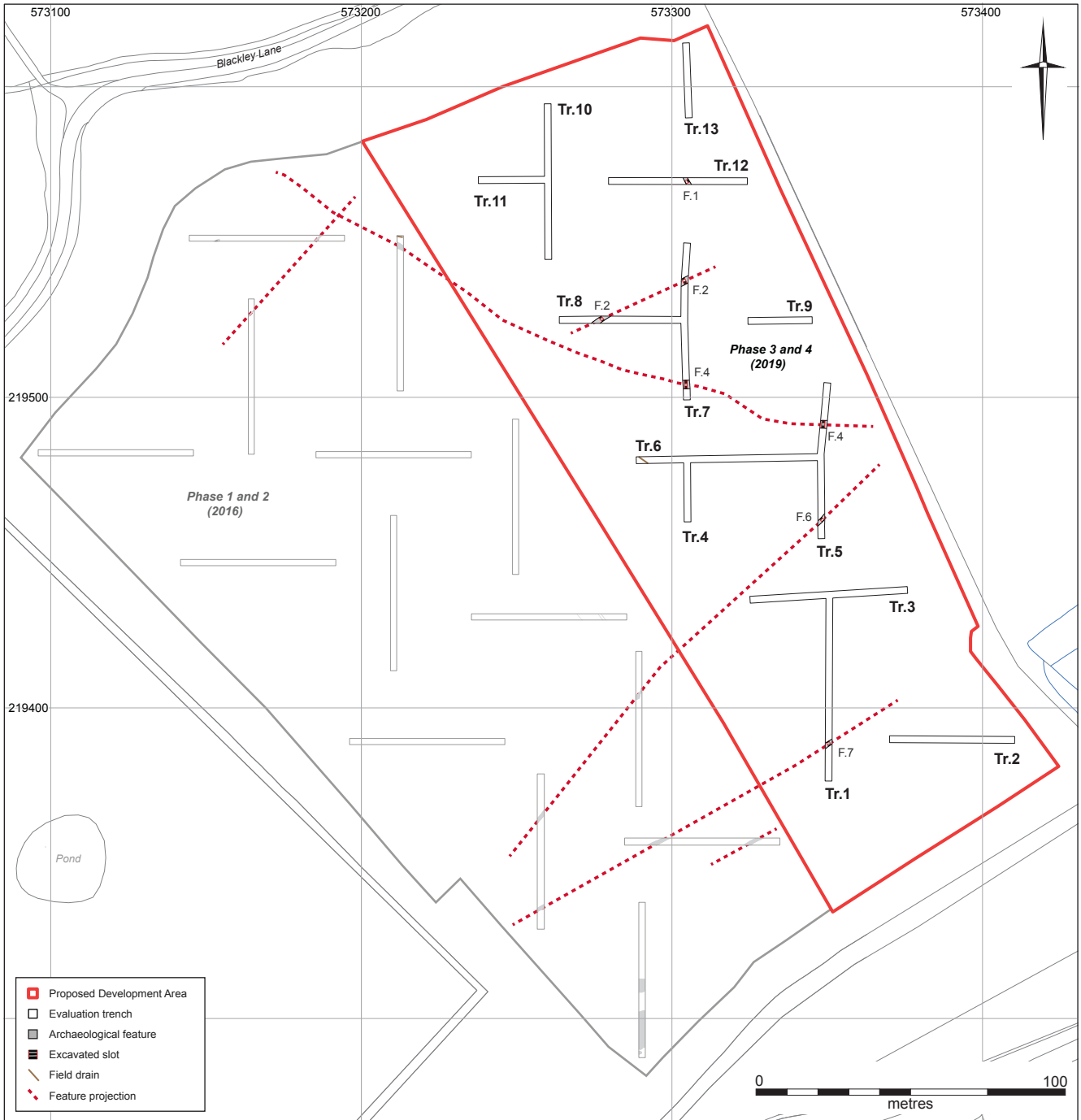


Figure 2. Trench plan

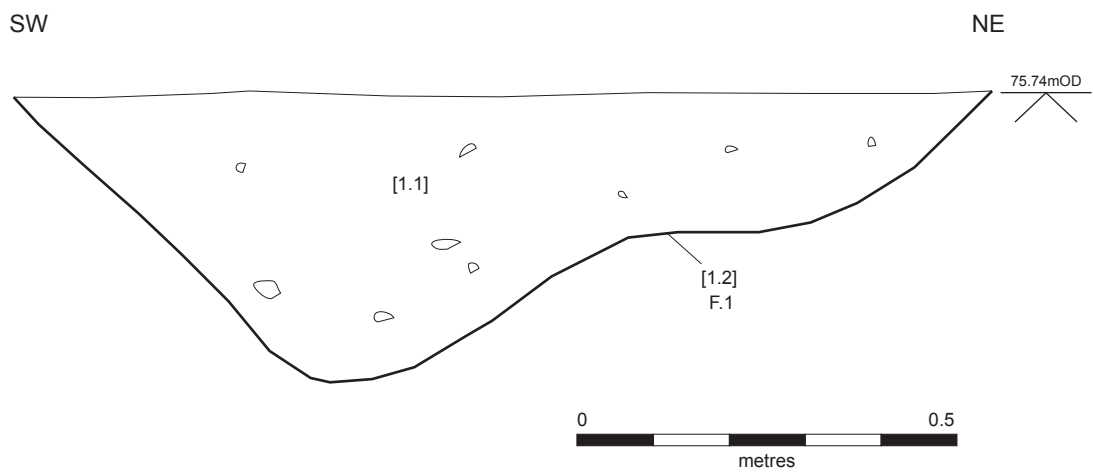


Figure 3. Photograph and section of ditch F.1

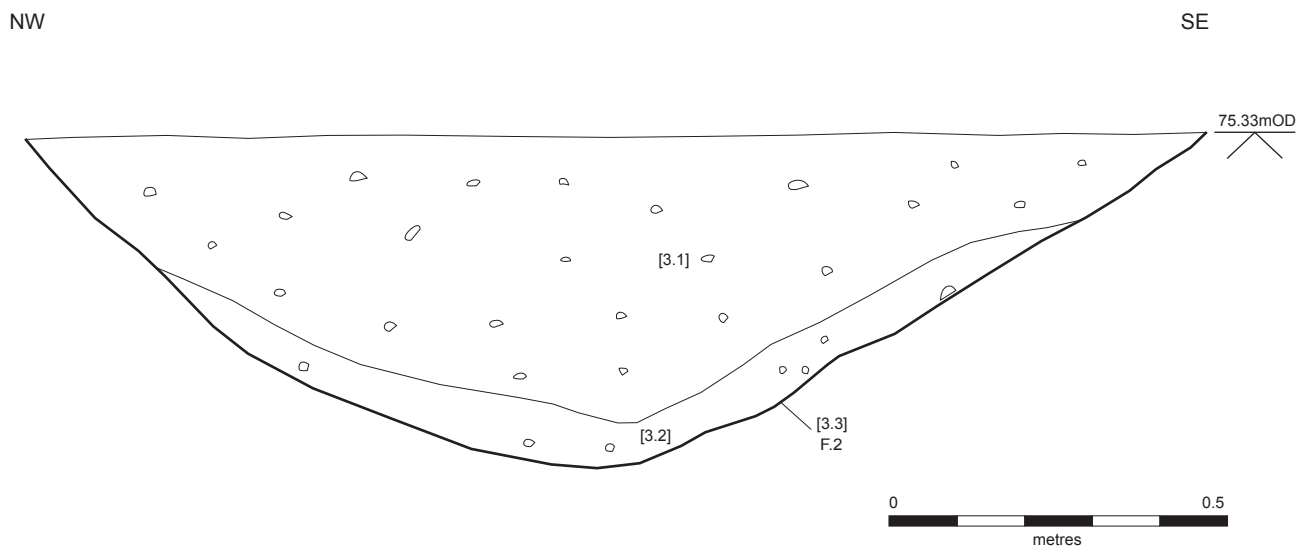


Figure 4. Photograph and section of ditch F.2

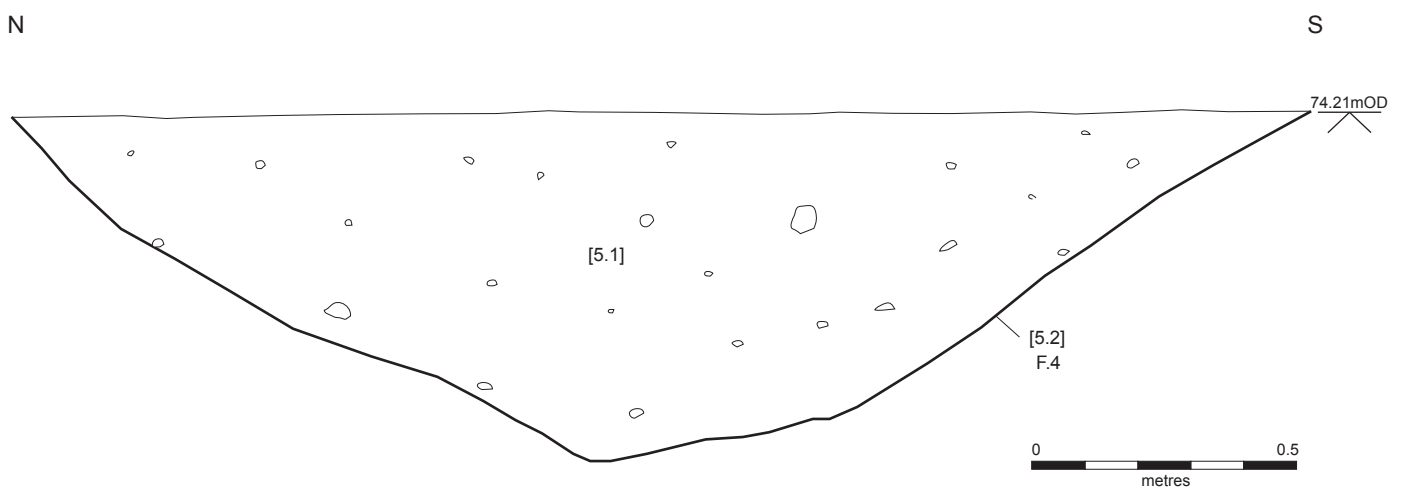


Figure 5. Photograph and section of ditch F.4

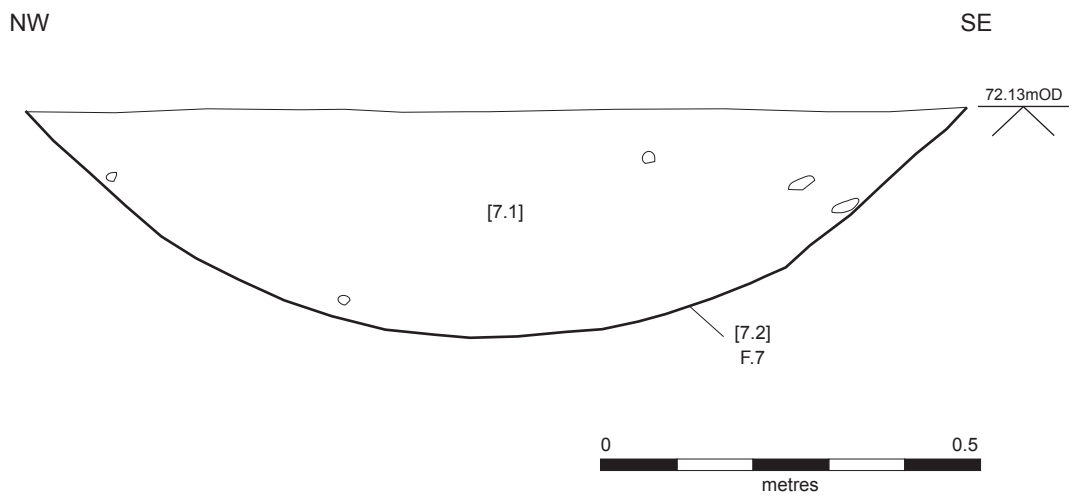


Figure 6. Photograph and section of ditch F.7



Figure 7. Aerial photography from 2000 and interpretation

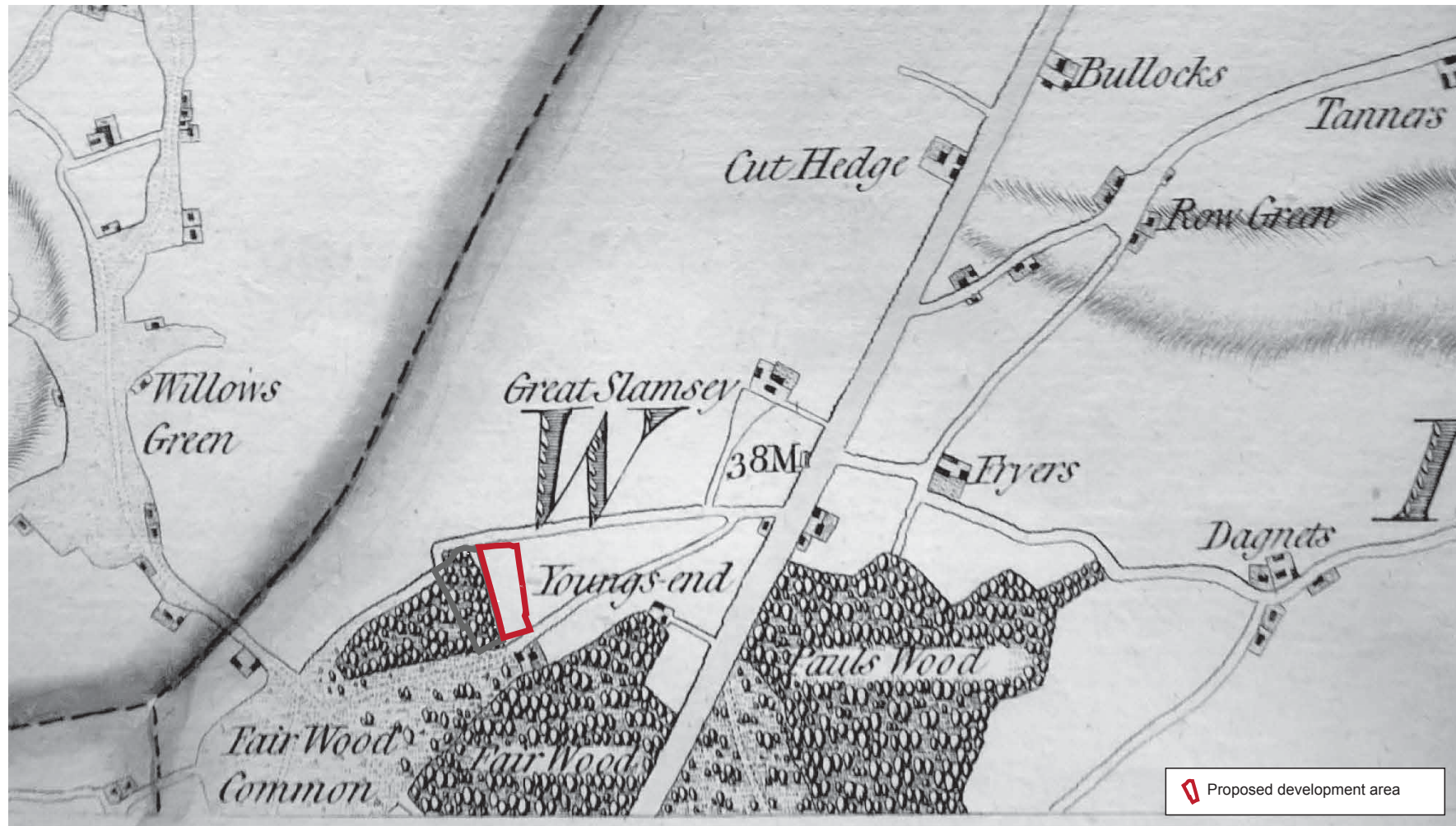


Figure 8. Chapman and Andre's 1777 map of Essex, sheet VIII

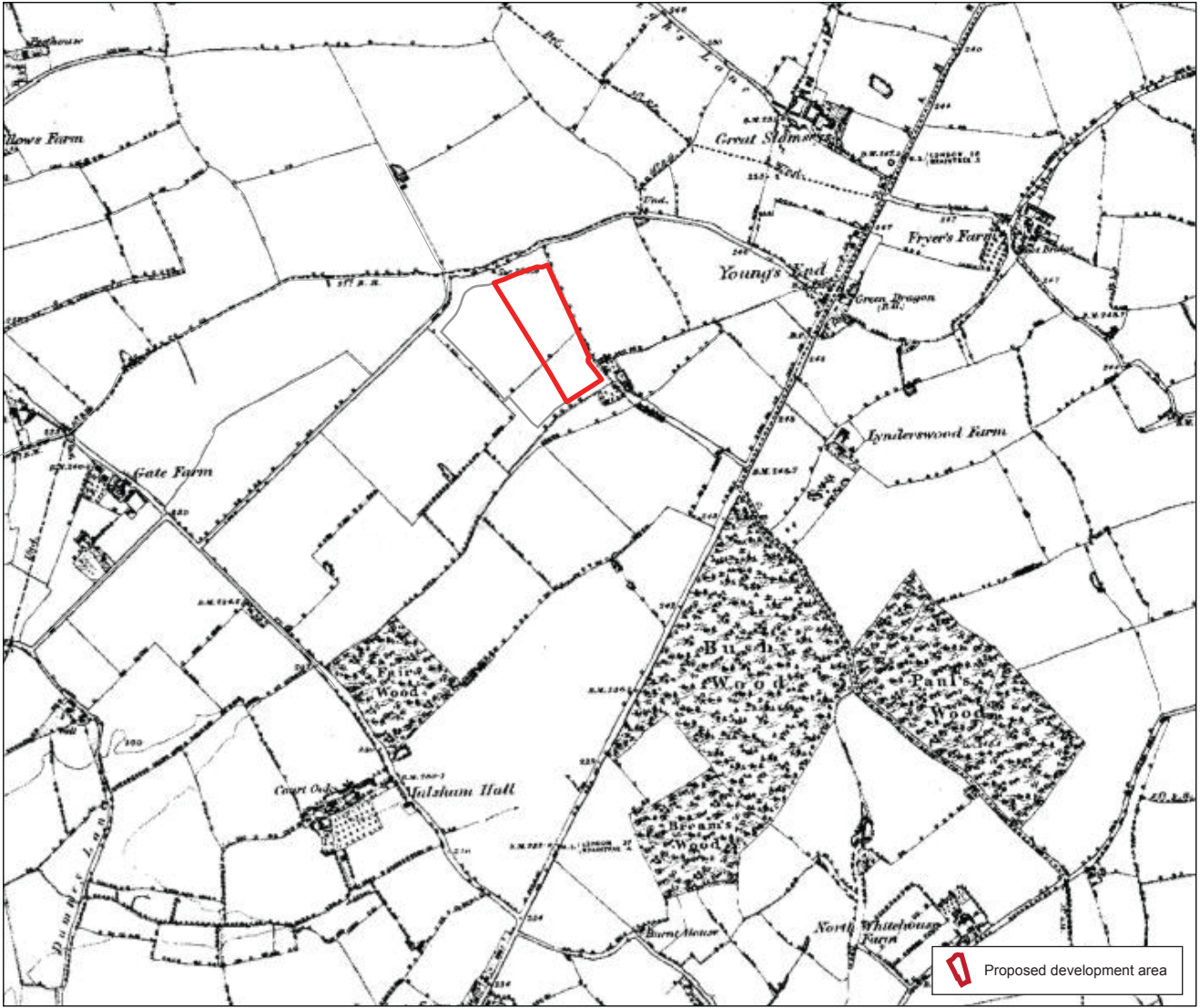
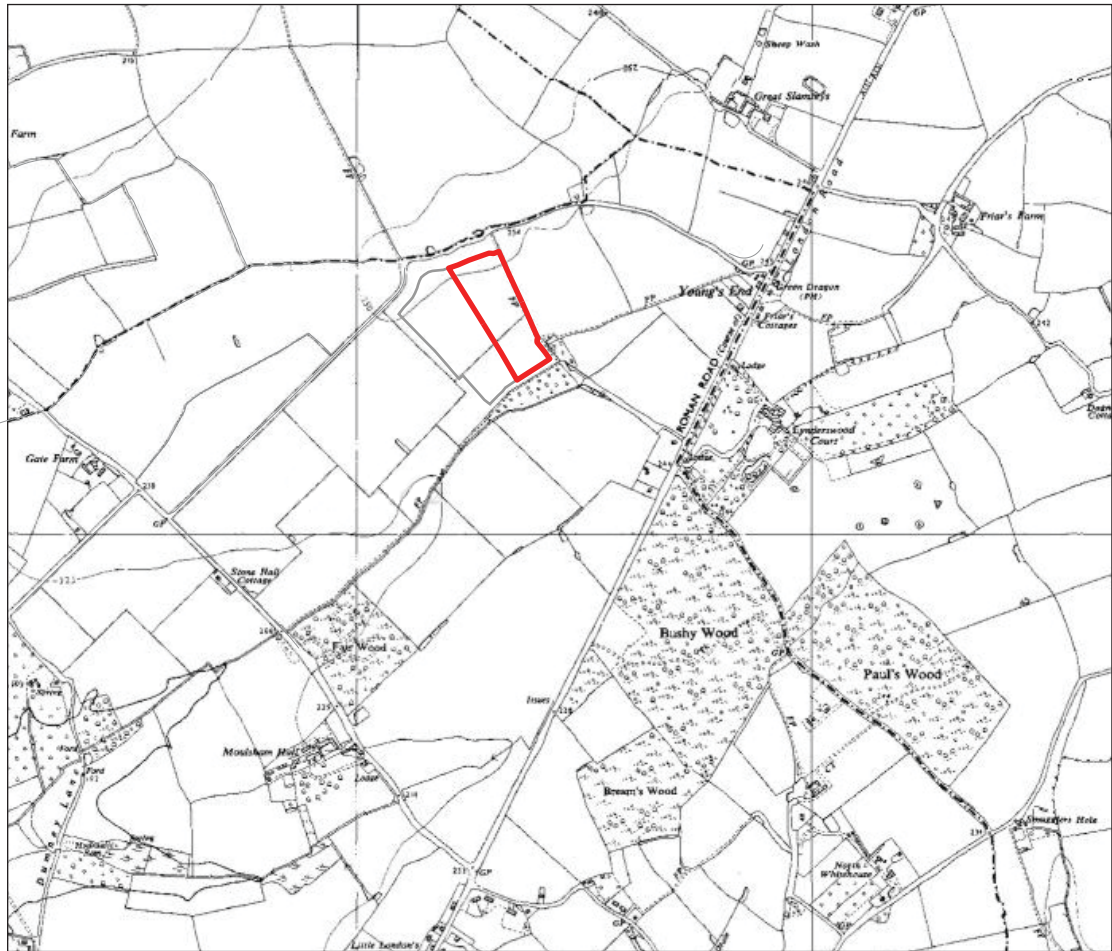



Figure 9. Ordnance Survey Maps of 1880



 Proposed development area

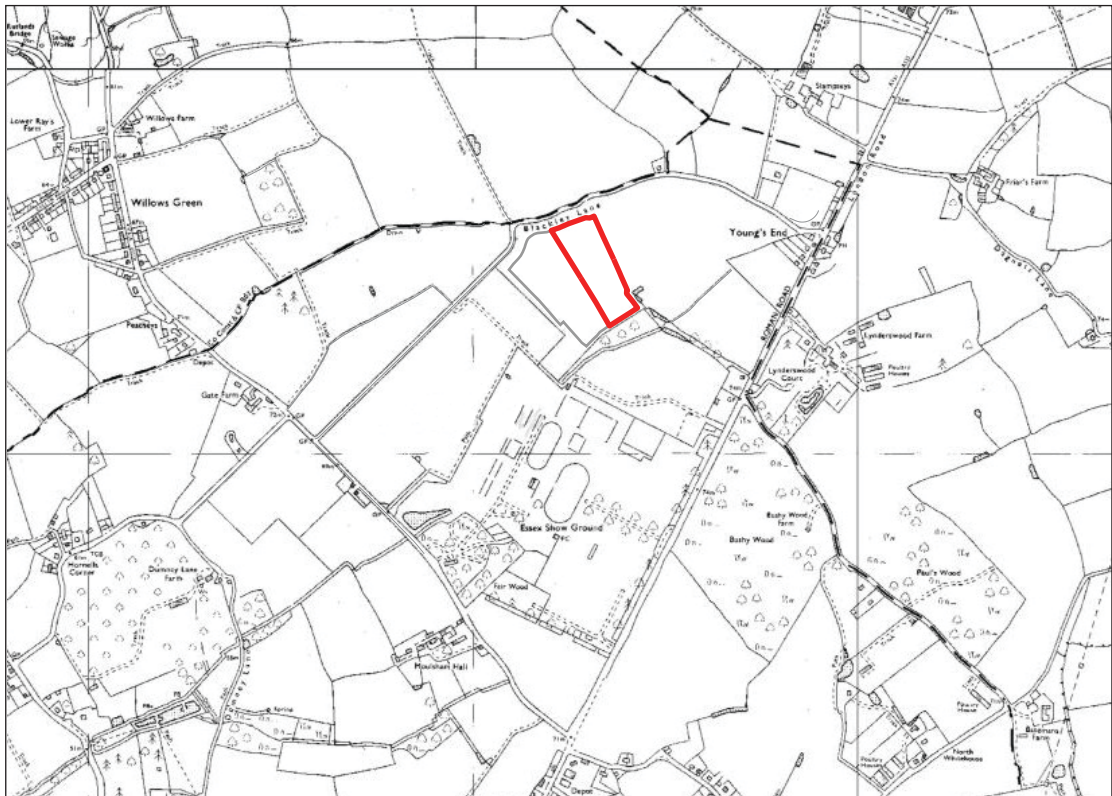


Figure 10. Ordnance Survey Maps of 1950 and 1970

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Project details

Project name	Blackley Quarry, Essex: Extension Phases 3 and 4 An Archaeological Evaluation
Short description of the project	A total of 520m of archaeological trial trenching was undertaken over an area of 2.7ha at Blackley Quarry, Great Leighs, Essex. The work was carried out in order to evaluate land ahead of extension of the quarry (Phases 3 and 4). The investigated area showed evidence of the post-Medieval arable land use recorded in Phases 1 and 2. The area was devoid of earlier archaeological features or deposits.
Project dates	Start: 18-03-2019 End: 21-03-2019
Previous/future work	Yes / Not known
Any associated project reference codes	DYBA19 - Sitecode
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Monument type	LINEAR Uncertain
Monument type	LINEAR Post Medieval
Significant Finds	METAL Post Medieval
Significant Finds	BRICK Post Medieval
Methods & techniques	"Metal Detectors", "Sample Trenches"
Development type	Mineral extraction (e.g. sand, gravel, stone, coal, ore, etc.)
Prompt	Direction from Local Planning Authority - PPG16
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	ESSEX CHELMSFORD GREAT AND LITTLE LEIGHS Blackley Quarry
Postcode	CM77 8QW
Study area	2.7 Hectares
Site coordinates	TL 733 194 51.845769571313 0.516179233287 51 50 44 N 000 30 58 E Point
Height OD / Depth	Min: 72m Max: 76m

Project creators

Name of Organisation	Cambridge Archaeological Unit
Project brief originator	City/Nat. Park/District/Borough archaeologist
Project design originator	Emma Beadsmoore
Project director/manager	Emma Beadsmoore
Project supervisor	Clara Schonfeld
Type of sponsor/funding body	Developer
Name of sponsor/funding body	Frank Lyons Plant Services

Project archives

Physical Archive Exists?	No
Digital Archive recipient	Cambridge Archaeological Unit
Digital Contents	"Survey"
Digital Media available	"Spreadsheets","Survey","Text"
Paper Archive recipient	Cambridge Archaeological Unit
Paper Contents	"Survey","Stratigraphic"
Paper Media available	"Survey ","Context sheet","Correspondence","Photograph","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Blackley Quarry, Essex: Extension Phases 3 and 4 An Archaeological Evaluation
Author(s)/Editor(s)	Schonfeld, C.
Other	CAU report no.1419

bibliographic
details

Date 2019

Issuer or publisher Cambridge Archaeological Unit

Place of issue or publication Cambridge

Description 13pp, 10 figures

Entered by Clara Schonfeld (css40@cam.ac.uk)

Entered on 4 April 2019

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