Cowlins Field, Mount Bures: excavation of a Neolithic Longbarrow
Anna Moore, Denise Hardy

Introduction

A series of impressive cropmarks along the valley of the River Stour, which separates Essex from Suffolk, has been known about for some time [1]. In 1974/5, one of a group of ring-ditches (TL91253308) lying on land belonging to Mr H C Cowlin at Mount Bures, Essex, i.e. south of the river, was excavated by members of the Colchester Archaeological Group [2]. Cremated bone and sherds of probable Bronze Age pottery were recovered during this excavation. Close by this group lies a monument that has been interpreted from the cropmarks as a longbarrow (TL91353310).

Illustration 1 Cowlins Field cropmarks from 'Essex From the Air'. Copyright of Essex County Council.

An aerial photograph (hereafter the **AP**) taken in 1996 and published in 'Essex from the Air' by David Strachan showed two parallel lines of cropmarks some 45m long and 22m apart, most probably ditches, with two lines of pits between them (Illustration 1). Strachan suggested that "the lines result from quarry ditches from an earthen longbarrow and that the pits supported timber posts of a structure covered by the mound." The AP also showed other linear features that look like ditches to the north of the 'longbarrow' that may, or may not, be associated with it.

In April 2011, a fieldwalk was carried out in the fields containing both the ring-ditch and longbarrow cropmarks, and a number of flints were found which were identified as Neolithic, but not close enough to the supposed longbarrow to be linked with it [3].

On the surface of the same field as the longbarrow cropmarks and just a few metres away from them, in 1984 the landowner found a late Neolithic flint adze (Martingell 2011).

In September 2011, the landowner David Cowlin (son of Mr H C Cowlin), kindly invited Colchester Archaeological Group to excavate the longbarrow site.

Geophysical survey - Method and Results.

The objectives of this geophysical survey were:
(i) to locate the main features on the ground with sufficient accuracy to support an informed decision as to where to carry out an excavation; and,
(ii) to identify any features that were not apparent on the AP.

Two geophysical survey techniques were used; magnetometry, followed by resistance; using the same baseline for both surveys.

The magnetometry survey of an area 60m by 50m was carried out in March 2011 using a Geoscan Research FM 18 Fluxgate Gradiometer. Each grid was surveyed in a south to north direction along lines 1m apart, taking four readings per metre along each line. **Fig 1** shows the geophysical image from the magnetometry survey (hereafter the **magplot**). **Fig 2** is the same magplot, annotated to identify the more significant features. Also marked on Fig 2 is the location of the excavation trench which was subsequently dug.

The resistance survey commenced in September 2011 using a CIA/TR Systems resistance meter. Readings were taken every 0.5m along lines 1m apart. Completion was delayed until mid October, when the crop was lifted, by the presence of several rows of potatoes running diagonally across the centre of the site. In the meantime the opportunity was taken to extend the survey to the north and east of the area as far as the field boundaries allowed. **Fig 3** shows the geophysical image from the resistance survey (hereafter the **resplot**). **Fig 4** is the same resplot, annotated to identify some of the more significant features.

Throughout this report on a magplot ***dark*** represents a strong magnetic field; on a resplot ***dark*** represents low resistance. Using this convention physical features such as ditches and pits tend to appear as dark features on both types of plot. Both the magplot and resplot are printed at the same scale (1:1,000).

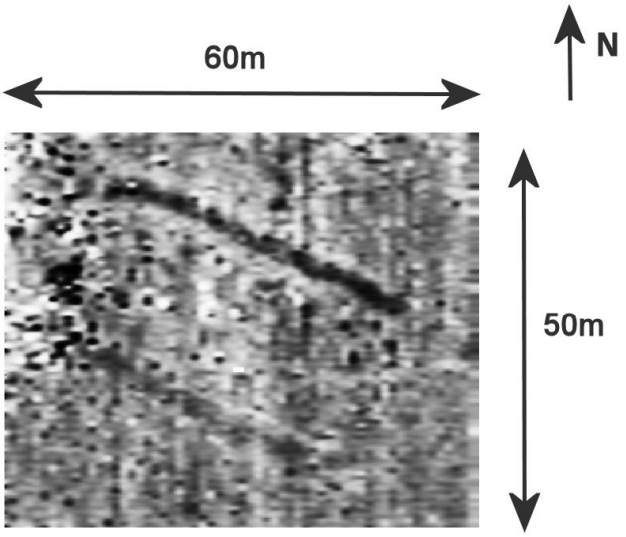


Fig1

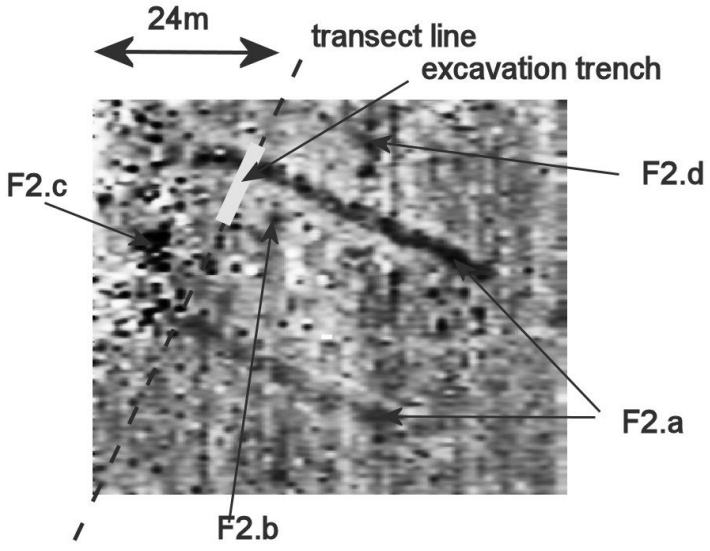
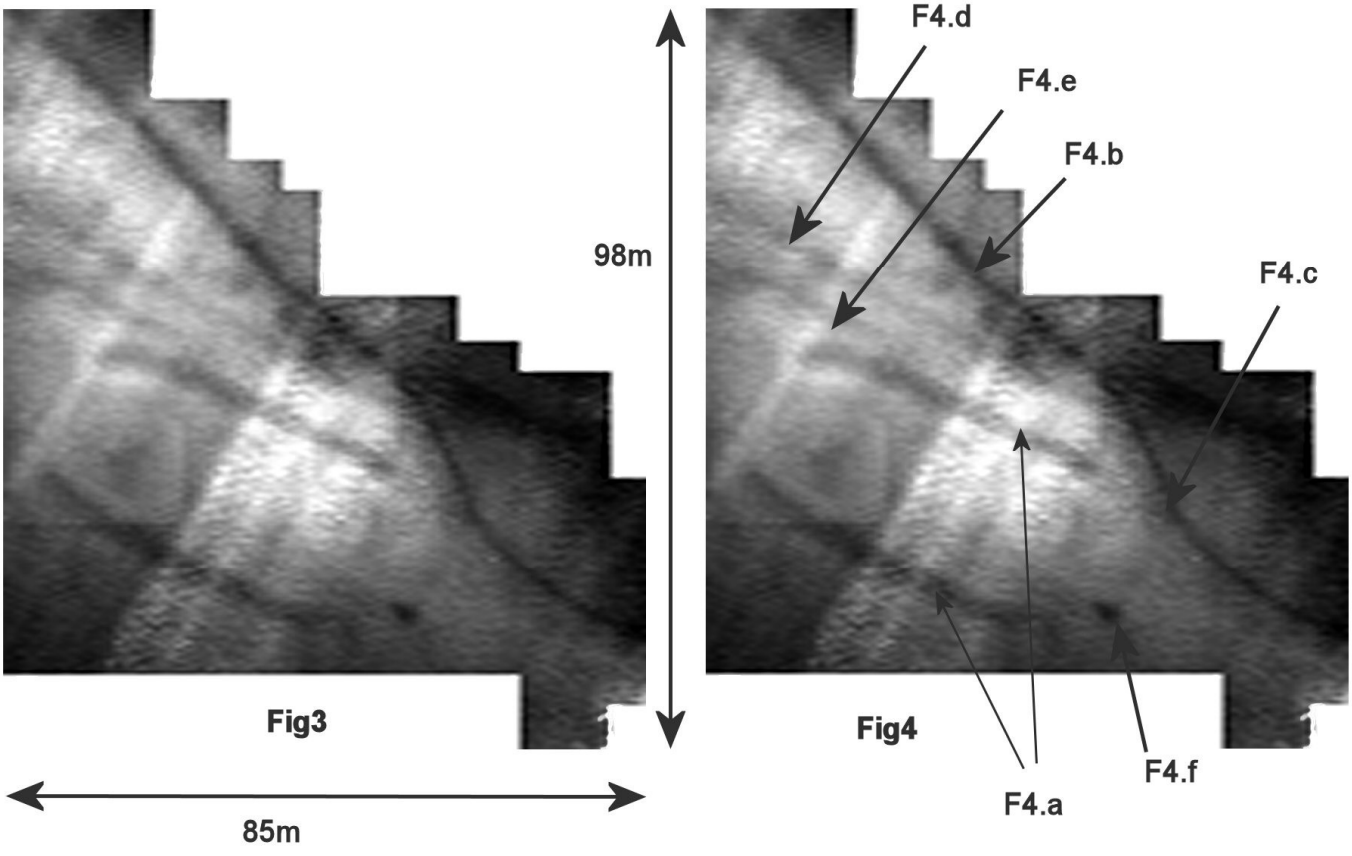


Fig2

Discussion

The magplot **Fig1** covered the area containing the main feature that was the target of the survey. Unfortunately, much of this site turned out to be magnetically 'noisy', due to the ground being contaminated with ferrous junk (common on farm sites) and bonfire debris, both of which tend to obscure the underlying archaeology. Whilst the main ditches of the feature were readily identified on the magplot, none of the 'postholes' could be located with certainty.

The two curvilinear features **F2.a** on the magplot correspond closely to features on the AP thought by Strachan to be the remains of the quarry ditches of an earthen longbarrow. Feature **F2.b** appears to be one of several pits or 'postholes' (which unfortunately do not show up as clearly or as evenly spaced on the magplot as on the AP) that Strachan suggested may have supported timber posts of a structure covered by the mound. The transect line of the **excavation trench** was chosen with the intention of cutting through both the NW section of the 'quarry ditch' and one of the more convincing 'postholes' on the magplot. The irregular dark feature **F2.c**, one of several in the NW quadrant of the plot, may be evidence of burning which, given the close proximity to farm buildings and nearby remains of 'bonfires' , may well be recent in origin. Scattered across the plot, but again most noticeable in the NW quadrant, are numerous 'iron spikes', isolated dark spots each closely coupled with a white flare, typically caused by ferrous junk, most likely of recent agricultural origin.



Resistance measurement is unaffected by ferrous junk and burning, which partly explains why the corresponding NW quadrant on the resplot **Fig3** is much less cluttered. The faint white (higher resistance) traces which run SW to NE across the resplot follow the line of modern ploughing (and of the potatoes) and are probably agricultural rather than archaeological in origin. The two curvilinear ditches **F4.a** are readily identifiable, as on the magplot F2.a, but strangely there is no clear evidence on the resplot for the 'postholes' that appear on the AP. The most noticeable feature **F4.b** on the resplot is a ditch, some 120m in length, running diagonally across the plot from the NW to SE corner. There is a distinct kink, or change in direction, in this ditch at **F4.c** as it passes the open eastern end of the 'longbarrow', suggesting that the latter was extant when the ditch was constructed. The eastern section of this ditch, with its kink, is not visible on the AP, because at that time there was a different crop in this part of the field. Two smaller and fainter linear features **F4.d** and **F4.e** are ditches that also appear on the AP. Only a small part of the ditch feature F4.b, about 10m in length, appears faintly as **F2.d** on the magplot. Finally, there is an irregular feature **F4.f** on the resplot, just outside the open eastern end of the 'longbarrow', which appears to be a pit about 2m across. With the eye of faith this pit-like feature can be seen, albeit faintly, on the magplot.

Excavation

An exploratory trench was dug in order to establish the width and depth of the ditch, the depth and shape of one of the pits/postholes, and to recover any datable material. The trench was placed towards the west end of the northern ditch, taking in the largest of the pits/postholes (Illustration 2). All excavation was carried out by hand, with no machining. About 300mm of modern ploughsoil was removed; beneath this was a layer of subsoil, consisting of between 300mm-400mm of orange sandy loam, which was also removed.

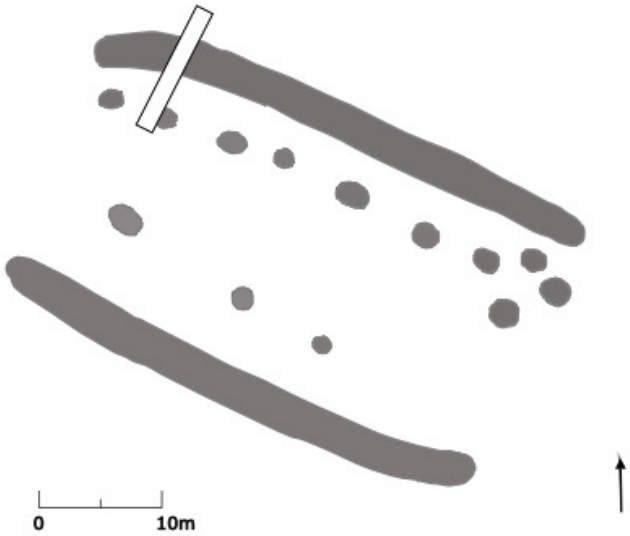


Illustration 2 Plan of the ditches and pits with the excavation trench marked

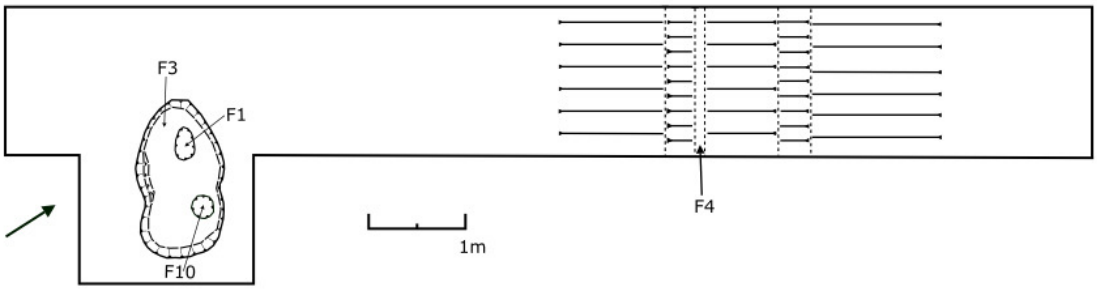


Illustration 3 Plan of the trench, showing the ditch and pit

The Ditch

The fill of the ditch (F4) was a light sandy silt; lower down were layers of gravel and a thick layer of black organic material (F9), which contained charcoal. A small sherd of prehistoric pot (Neolithic or Bronze Age) was found close to the northern edge of the ditch, at the bottom of the subsoil. The cut of the ditch was steeper on the southern edge than the northern; at its deepest it was 1.64m from the bottom of the subsoil. Given the wide gap between the north and south ditches, the northern ditch did not seem to be of sufficient size to have supplied enough earth for a substantial mound.

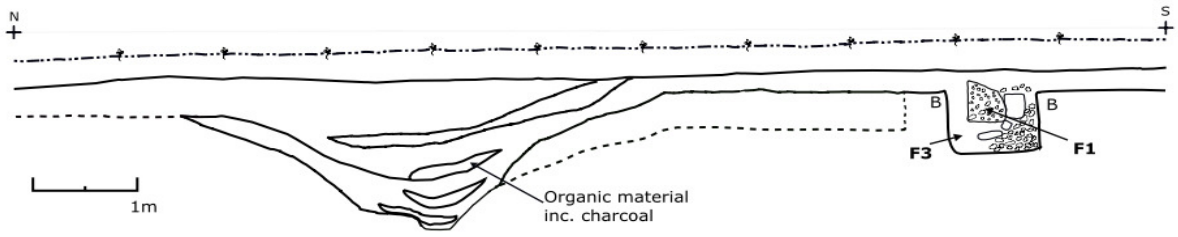


Illustration 4 Ditch and pit: Section showing layer of charcoal; Pit (F3) with posthole (F1)

The Charcoal

The charcoal was sent for analysis to Scottish Universities Environmental Research Centre (SUERC). The sample produced a determination of 4770 ± 30 BP, dating this activity to 3641-3516calBC.

The Pit

The pit or posthole (F3) was a 'waisted' oval in plan, 1m60cm long and 77cm wide at its narrowest point, with a depth of between 1m18cm - 1m20cm. The sides were almost vertical, although there had been a slump of sandy gravel on the south edge. The fill was a stone-free yellow-brown sandy silt. Two later possible postholes had been cut into the fill of the pit (F1 & F10). F1 was visible above the level of the top of pit F3; the top of F10 was level with the top of F3. The fill of posthole F1 was a dark, thick gravel; the fill of posthole F10 was a dark, much finer gravel. The postholes were located roughly one at each end of F3 and it is possible that F3 represents two circular pits, one of which had been cut into the other, and each with a later posthole. However, there was no indication of a later cut, and the fill of the pit was uniform throughout. F3 also con-

tained a number of other possible stakeholes.

Two sherds of probably Neolithic or Bronze Age pottery and a small piece of cremated, probably human bone was found in the fill of F3, close to but below the bottom of posthole F1. The pot and bone were found at the same level, but otherwise not associated with each other. Both are assumed to be residual.

A number of worked flints were found in the upper layers as well as in the ditch and in the pit. The flints report follows.

A ground level survey across the site was conducted and it showed a very slight rise over the area of the longbarrow before the ground fell away to the hedge which bordered the northern edge of the field.

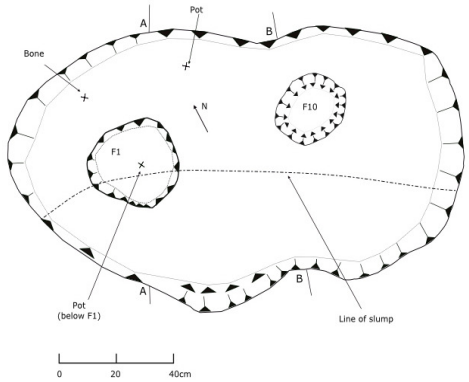


Illustration 5 Plan of pit showing two possible postholes

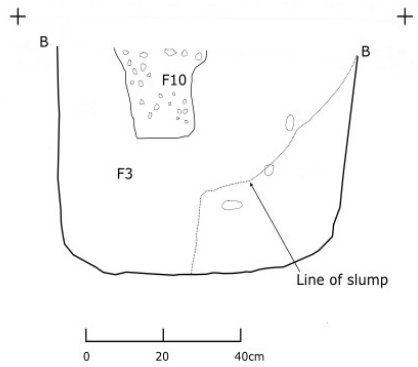


Illustration 6 Pit F3; section showing possible posthole F10

Conclusions

The ditches of the monument measure approximately 45m from end to end, and are about 22m apart. The long axis is roughly parallel to the river and on rising ground above the flood plain, so that the best view of the monument would have been from the valley bottom or from the opposite side of the river.

On that side (i.e. on the Suffolk side) appears the cropmark of a cursus, the western end of which has been truncated by the digging of a quarry. The cursus also stood on rising ground above the flood plain of the river, and so, assuming that the monuments were contemporary with each other, would almost certainly have been visible from the longbarrow.

Recent investigations of longbarrows have suggested that the stages of construction were as follows: a mortuary enclosure was built at which some sort of ritual took place, and bones were deposited; this structure was then extended some time later, usually to the west, so that the mortuary structure ended up being at the east end of the monument; then ditches were dug and a mound formed over the top of the structure, which also sealed the entrance; this effectively ended its function as a place of burial, although the bones of the ances-

tors were left interred

However, it seems unlikely that the pits at the Bures monument represent the remains of a structure. The line of pits alongside the northern ditch is not matched by a similar number on the southern side; neither are the pits on the southern side parallel with the ditch as they are on the northern side, but appear more random. Also, the line of pits in the north are about 5m apart and about 12m in distance from those in the south, which would seem to be too far apart to support a roofed building. At the eastern end of the monument and just inside the curve of the northern ditch, a group of pits forms a rough square, and this may represent some type of 'mortuary enclosure'. If so, it may be that instead of being extended as a structure, a line of pits was dug to the west, which then stood in isolation for some time, possibly containing posts as markers. These would have been clearly visible from the cursus on the northern bank of the river.

At some point, the pits were filled in, possibly at the same time that the ditches were dug. In the pit (or pits) that was excavated, posts were inserted in the fill of the pit, and these were later removed and the postholes backfilled. The earth from the ditches may have been used to create a mound, but given the size of the ditches compared to the area of the monument, earth would have to have been brought in from elsewhere to create the size of mound suggested by the cropmarks. Another possibility is that a narrower mound, made from the earth from the ditches could have been erected, possibly in the centre between the rows of pits. The 300-400mm of subsoil could represent a ploughed-out barrow.

Given the limited nature of the excavation, it is not possible to say whether the pits are contemporary with each other, or whether the two ditches were dug at the same time. Any future excavation could be concentrated on the eastern end to try to establish the presence of a mortuary enclosure.

Flints report
Denise Hardy

Context No.	Feature/Trench/ Layer No.	Description
1 (1 of 2)	T1 L1	Stone showing signs of hammering;* -
1 (2 of 2)	T1 L1	1-blade; 1- retouched natural piece; 1-flake;1-debitage; 1-secondary flake; 2-tertiary flakes; 8- chippings.
2		1-Blade –repatenated – Mesolithic/early Neolithic; 1-retouched flake; 1-notched bladelet; 1-core fragment; 1-small pot lid retouched and repatenated; 2-flake fragments; 1-retouched piece; 1-retouched natural.* 7-debitage; 4-chippings; 2-waste flakes; 2-burnt flints.
3 (1 of 2)		3- pot boilers; 1- small burnt flint; 1- chip ping, primary.

Context No.	Feature/Trench/ Layer No.	Description
3 (2 0f 2)		1-blade- early Neolithic, good; 1-retouched notched flake; 1- retouched pointed piercer; 1-flaked natural; 1-retouched natural, patination reformed; 1-retouched flake; 1-burin on blade? 3-retouched naturals, 1-notched flake fragment; 1-small scraper, 1-flake fragment; 1-blade fragment; 1-undiagnosed piece; 1-waste piece.*
4 (1of 2)	T1 L1 topsoil	1-core; 8-debitage; 2-primary flakes; 9-secondary flakes; 7-tertiary flakes; 10-chippings; 1- burnt flint (pot boiler?.)
4 (2 of 2)	T1 L1 topsoil	1-blade core; 1-retouched irregular shaped natural piece; 1-retouched natural; 1- re touched flake; 1- notched flake; 1-small piercer, 1-denticulated broken piece, 1-burnt piece. Chippings; 1- burnt flint.*
6	T1 L1	1-piercer; 2- chippings; 3-flakes; 4-debitage; *
6 (2 of 2??)		1-chipping; 1-burnt flint (pot boiler?)
7	T1 L2	2-cores; 1-bladelet; 1-flake, good; 1-scraper on natural, 1-flake;3- retouched naturals, 1-debitage; 2-tertiary debitage; 3-chippings.*
8		1- awl; 2-cores; 1-notched flake, tertiary; 1-reworked flake; 5 - primary debitage; 5-secondary debitage; 4-tertiary debitage; 3-flake chips.
8 (2 0f 2)		2-retouched naturals; 1-retouched flake; 1-bladelet;1-flake fragment.*
11 (1 of 2)		1- Core; 3- flakes, primary; 7–flakes, secondary; 5 - flakes, tertiary.
11 (2 of 2)		2-piercers; 4-retouched natural; 2-flakes; 1-flake fragment; 1-retouched flake. *
11 (3 of 3)		Burnt flint.
12	F4 T1 L1	1-broad blade, Mesolithic/early Neolithic; 1-flake; 3- debitage; 5-waste flakes.
13	F4 T1 L1	1-chipping.
16 (1 of 2)		2- small cores; 3 ½ bladelets; 2- debitage; 2-flakes, primary; 14- flakes, secondary; 3-flakes, tertiary; 9- flake chippings, tertiary.
17	T1 L1	1-retouched notched piece;1-debitage; 2-flakes; chippings.*
18	F3 L1	1- notched piece, good; 1-reworked flake; 2–chippings; 1-reworked primary flake; 1-secondary flake, 4-debitage; 7-chippings.
23		2-cores; 1-peircer; 1-burin, Neolithic,1-blade; 4-debitage. * 8-secondary flakes; 4-tertiary flakes; 7-chippings,
24		4-Cores; 1- debitage; 1- chipping, primary;

Context No.	Feature/Trench/ Layer No.	Description
		24- chippings, secondary; 29- chippings, tertiary; 1-debitage.
24 (2 of 2)		1-debitage; 8-chippings; 1-burnt flint chip.
25	T1 L2	1-retouched circular piece, possibly piercer; 1-retouched natural; 1-retouched flake; 1-awl retouched along one side on natural piece;1-debitage; 3-chippings.*
26		1-secondary debitage; 1-primary chipping; 2– tertiary flakes;3-tertiary chippings.
27		1-large Core; 1- small Core; 1-retouched natural; 2-retouched flakes; 1-primary debi tage;* 2- secondary debitage; 4-tertiary debitage; 1-waste chip.
28	F7 T1	1-notched flake; 1-chipping;1-secondary flake;1-chipping.*
31 (1 of 2)??	F3a T1 L1	1-chipping.***
32	F3a T1 L1	1-notched piece, secondary; 1-flake, second dary; 1-primary debitage; 1-secondary debitage; 3- chippings.
33 (1 of 1)		2 – Cores; 1- small retouched piece, pri mary; 16 –debitage; 2- flakes, primary; 7-flakes, secondary; 2-flakes, tertiary; 6-chippings.
33 (2 of 2)		2-waste pieces; 1-large retouched block; 2-retouched natural; 1-pointed end of small blade; 1-small blade; 1-notched pot lid; 1-utilised pot lid; 4-retouched flakes; 1-waste block; 2- retouched on natural; 1-natural with utilised edge; 1-pointed flake; 2 retouched piece; 1-blade like piece; 1-utalised flake; 1- piercer; 1-burin on natu ral fracture (4 burin removals by break) 1-borer on large flake. All non diagnostic*
34		1-blade, broken Mesolithic/early Neolithic;1-primary debitage; 1-secondary debitage; 1-chipping.*
35		2-flake chippings.
36	F3a L2	1-notched Flake;*
37	T1 L2	1-Debitage, tertiary.
40		1-broken blade piece with end scraper – Neolithic/Bronze; 1-abandoned core with the possibility of use; 1-rough core, 1-flake fragment; 2-tertiary flakes; 1-tertiary debi tage; 3-secondary debitage.*
41	F3 L1	1-point retouched natural piece; 1-flake; 5-chippings.*
42		1-fine retouched natural; 1-end bladelet; 1-notched(?) flake; 1-secondary debitage.*
43	F1	1-trimming.*

Context No.	Feature/Trench/ Layer No.	Description
44	F9	1-utilised end of flake;*1-core; 1-notched flake; 1-debitage.
48	F3 L1	1-primary notched piece; 1-debitage; 1-chipping.
49		1-retouched piercer on natural; 1-retouched natural; 1-waste piece. 1-primary debitage; 4-secondary debitage; 2-tertiary debitage; 5-flake chippings.*
50	T1 north end L2	1-re-utilised piercer.*
52		1-utilised natural; 1-retouched flake; 1-piercer which could have also been used as a scraper;1-tertiary debitage,1-waste flake.*
53		1-fragment of chisel ended piece;*1-primary debitage; 3-secondary debitage; 3- flake chip pings.
54		1-pot lid with fine retouch*.
58	F3 L1	1-Blade removal debitage, tertiary; 1- piercer; 1 chipping; 2- debitage, primary; 2- debitage, secondary.
59		H** 1-retouched natural; 1-piercer on re touched natural.
61 (1 of 2)		1-end scraper on square sectioned flint- Iron Age; 1-retouched flake – semi circular, re touched at widest end.non diagnostic;1-flake chipping.*
62		2-natural retouched flakes; 1-bladelet; 1- secondary debitage; 1-flake; 1-chipping.*
63	F11	1-retouched fragment possible knife; 1-retouched pot lid; 1-small piercer; 3-debitage.*
64	F4	1-Core –;1-blade core; 1-flake; 2-notched on natural pieces; 1-retouched natural piercer; 1-piercer on natural; 1-chipping.*
64 (2 0f 2)		1-scraper on natural piece; 1-flake, good; 1-chipping.
65	F11 under pebbles	1-tertiary flake; 2-tertiary chippings.
65 (2 of 2)		1- retouched edge on natural; 1- retouched natural; 1-denticular blade; 1- flake fragment.*
No Label		2- secondary debitage; 1-tertiary debitage.
Unstratified		2-secondary debitage; 4-burnt flint pieces.
Unstratisfield – in bone bag		1-retouched natural; 1-retouched and utilised natural block. 1-core.*
Sub-soil	T1 L2/split	1-flint nodule with flaked pointed end, possibly used for hammer stone.*

Unless otherwise stated all flints are non diagnostic.

* Hazel Martingell helped me in diagnosing many pieces within the assemblage.
**Flint to be shown to geological expert: Large flint with two surfaces formed at one date, then two others at different times. Knapped at some stage – Mid Palaeolithic??. Is it possible to date when breakages occurred as possibly two middle Palaeolithic flake removals.
***Probable core with recent damage – See a Geologists

Identified periods of worked flints

Mesolithic/early Neolithic:

1	Repatinated blade
1	Broad blade

Neolithic:

1	Early Neo. Blade
1	Burin

Neolithic/early Bronze:

1	Broken blade piece on end scraper.

Iron Age:

2	Scrapers, 1 of which is on the end of a square sectioned flint.

Unidentified periods of worked flint

26	Cores
8 ½	Bladelets (Including 1 notched)
1	Denticular blade
1	Denticular broken blade piece
7	Blades/fragments
1	Burin on Blade
1	Retouched fragment possibly knife
1	Borer on large flake
1	Awl
1	Fragment of chisel end piece
11	Piercers of which 1 could have been used as a scraper.
11	Notched flakes and pieces, including 1 notched pot lid.
4	Retouched pot lids
18	Retouched flakes, block and pieces
41	Natural flint pieces/flakes which has been worked
2	Scrapers on natural pieces
1	Burin on natural fracture (4 other burin removals by natural fracture)
4	Piercers on natural flint
1	Awl retouched on natural piece
1	Large flint showing signs of hammering
1	Flint nodule with flaked pointed end possibly used as a hammer stone.
400	Approx; Flakes, Chippings and larger debitage pieces.

Total of 150 ½ worked flint flakes, pieces and blocks.

Tools of Convenience:

In conclusion from the Cowlin Farm assemblage it is not possible to date the 'Long Barrow' or Funerary Monument by the flints alone. There is not enough evidence of Neolithic or any other period of flint found within the north west section of the ditch and post hole. It also has to be taken into account that this monument lies parallel to the river which over the millennia has flooded and possibly deposited flints, natural or otherwise. However, there are a lot of natural freeze thaw flakes most with retouch and/or flake removals (natural pieces modified). These pieces were picked up and modified for convenience. Unfortunately all are non diagnostic.

Within the academic world there is a great debate over these natural pieces as to whether these retouched/flake removals are done by our ancestors or by nature. Looking at these flints in greater detail it is obvious that there is strong evidence that nature has not caused these retouches.

Throughout the prehistoric period, especially with the hunter gatherers, would it not be feasible for our ancestors to make use of any pieces that come to hand, a quick modification and a tool, albeit a 'rough out', could be used, then thrown away? Therefore eliminating the necessity of carrying these, often heavy objects, around. Further study of this theory is needed.

My grateful thanks go to Hazel Martingell who has helped me considerably in putting this report together.

List of illustrations

Acknowledgments

The pottery was seen by Howard Brooks and Stephen Benfield of Colchester Archaeological Trust, and Nigel Brown of Essex County Council, and thought to be either Neolithic or Bronze Age. The cremated bone was examined by Adam Wightman of Colchester Archaeological Trust and was thought to be probably human. Thanks go to all of those.

With thanks to Ida McMaster for her generous donation towards the dating of the charcoal sample.

With thanks to Aline and David Black for the geophysics surveys.

1. Brown, Nigel; Knopp, Debbie, and Strachan, David 'The archaeology of Constable Country: the cropmarks of the Stour Valley'. *Landscape History*, volume 24, pages 5-28, 2002.
2. CAG Bulletin 18, 1975, pps 9-11
3. Archaeological Fieldwalking at Cowlins Field, Mount Bures, Essex, Brooks 2011

Members of CAG who worked on the site were: Graham Brundell, Peter Durrant, Don Goodman, Denise Hardy, Louise Harrison, Anna Moore, Jonathan Oldham, Les Peck, Pauline Shinn, Carole Wheeldon

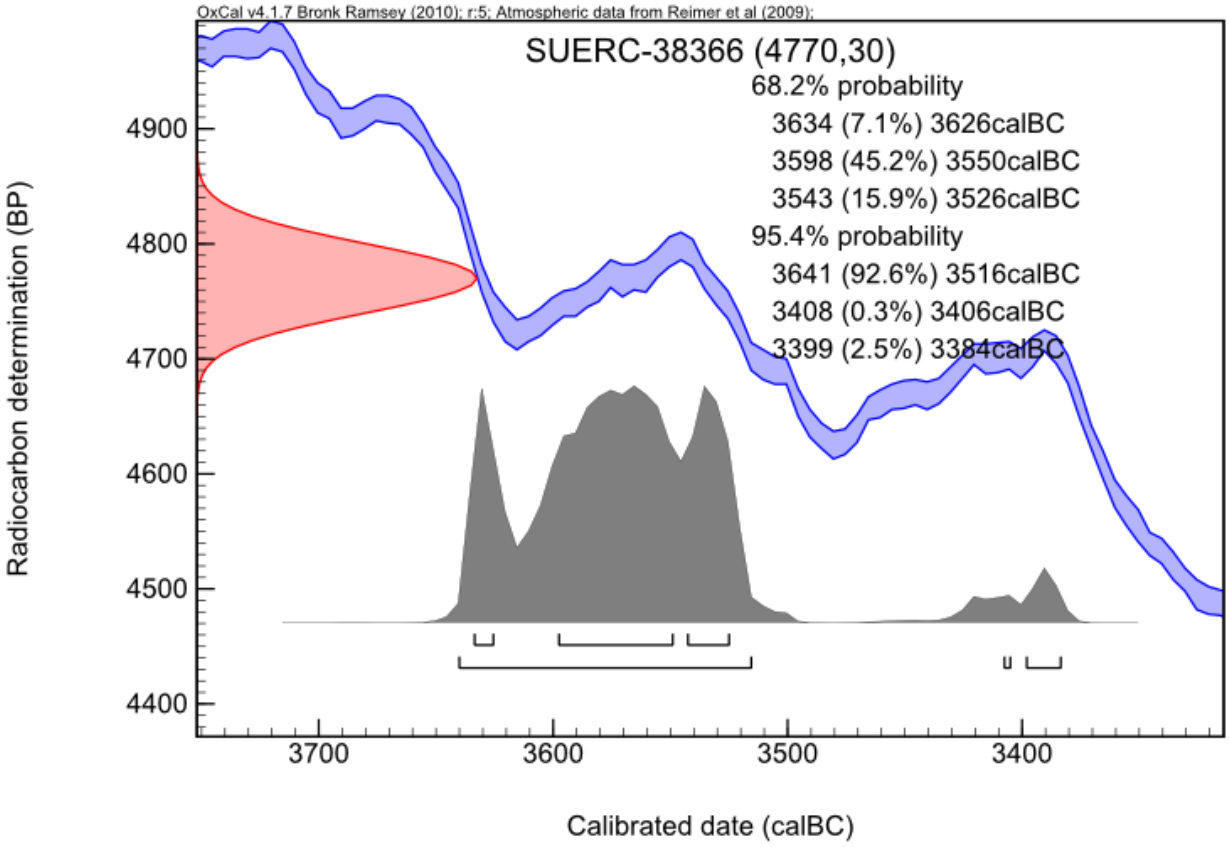


Illustration 7 Radiocarbon report on the charcoal

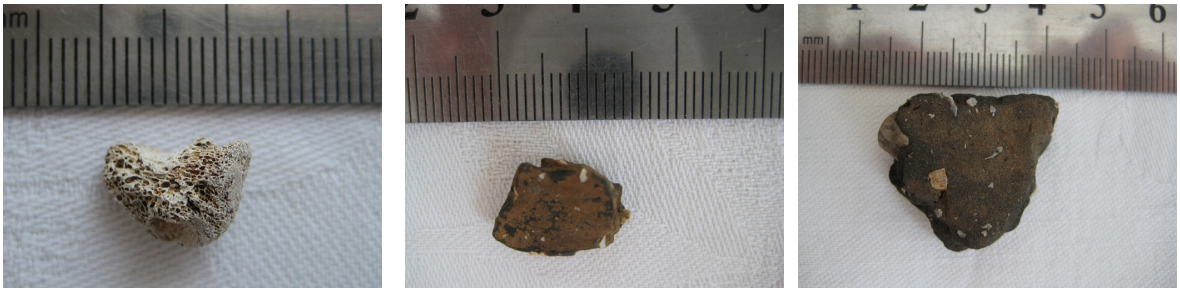


Illustration 8 The bone and pot from F3