# BULLS LODGE QUARRY FORMER BOREHAM AIRFIELD ESSEX

# ARCHAEOLOGICAL MONITORING AND EXCAVATION



FIELD ARCHAEOLOGY UNIT

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**BULLS LODGE QUARRY FORMER BOREHAM AIRFIELD** 

**ESSEX** 

ARCHAEOLOGICAL MONITORING AND EXCAVATION

2007

**Client:** Hanson Aggregates

**NGR:** TL 73438 11968

Site Code: BOAF05

**ECC FAU Project Number:** 1822

**Date of Fieldwork:** 23/8/07 to 24/8/07 and 26/11/07 to 30/11/07

SUMMARY

Archaeological remains, including those of a Late Bronze Age building, were discovered

following topsoil stripping in advance of mineral extraction at Bulls Lodge Quarry, Boreham.

The building was defined by two rows of post-holes and measured 4.25m by 8.25m. It was

slightly bow-sided, and it possibly had a doorway on its north-eastern side. The investigation

also found a small quantity of worked flint, a Late Bronze Age gully, some undatable pits, and

post-medieval/modern field ditches. The Late Bronze Age features are conjectured to be the

remains of a small settlement.

The discovery of the Late Bronze Age building/settlement augments an existing corpus of

excavated Late Bronze Age settlement and religious/ritual sites from within the Chelmer

Valley. This includes the Late Bronze Age placed deposits, which were found at Great Holts

Farm in 1993 (Germany 2003), and the Late Bronze Age cremation burial, which was

uncovered by the quarry in 2006 (Germany 2007).

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#### 1.0 INTRODUCTION

This report describes the results of archaeological monitoring and rapid excavation following topsoil stripping before mineral extraction at Bulls Lodge Quarry, Boreham, Essex. The archaeological fieldwork was carried out by the Essex County Council Field Archaeology Unit (ECC FAU) on behalf of Hanson Aggregates. Planning consent for mineral extraction was granted in 1990, and allows the ECC FAU access to monitor each area of the quarry for archaeological remains before quarrying takes place. The scope of the archaeological work and its funding are determined by an informal agreement between Hanson Aggregates and ECC FAU, in consultation with the Essex County Council Historic Environment Management team (ECC HEM).

Copies of this report will be supplied to Hanson Aggregates, ECC HEM and the Essex Historic Environment Record. A copy of the report will be uploaded as part of the OASIS online archaeological record (<a href="http://ads.ahds.ac.uk/project/oasis">http://ads.ahds.ac.uk/project/oasis</a>). The project archive and finds will be stored at Chelmsford Museum.

#### 2.0 BACKGROUND

#### 2.1 Location

Bulls Lodge Quarry covers 320ha on the site of a former World War II airfield. It extends across much of the northern half of the parish of Boreham, and is situated 2km north-northeast of Chelmsford (Fig. 1). The surrounding landscape largely consists of arable fields and former quarry workings on a plateau at *c*. 50m OD, overlooking a loop of the river Chelmer. Remnants of some of the World War II runways still survive at the northern end of the quarry.

## 2.2 Geology

The underlying geology comprises a 2m-thick deposit of Boulder Clay above Chelmsford Gravels. Within the Boulder Clay are pockets of brickearth.

#### 2.3 Historical background

The following background information is based on Jones (1988), Stephen (1988), Clarke (2003), Archer and Clarke (2007) and Germany (2007).

Bulls Lodge Quarry occupies part of the former estate of the manor of New Hall. The estate's manor house stands near the south-western edge of the quarry, c. 1.5km from the

2007 monitoring area, and has been used as a convent since the late 18th century. The origins of the manor are uncertain, although it was first documented in 1301 and it is argued that it displaced an earlier manor known as Walkfares in the late 13th century (Clarke 2003, 1-5 and 67-9).

Documentary and cartographic records reveal that much of the estate of the manor was used as a large deer park. The precise boundaries of the deer park and the date of its formation are not known. The earliest reference to it dates to 1396, but it is possible that it was formed between 1250 and 1330, which was the main period of emparking in Essex. The disemparkment of the deer park began in the 17th century and was probably undertaken on a piecemeal basis over several centuries. By the late 18th/early 19th century, the deer park was no longer in existence, and enclosed fields and woods lay across its former area.

The airfield was constructed in 1943 by the 861st Engineer Battalion of the US Army. For a short period after the war, it was used as a racetrack for motorcycles and cars. In the 1950s, it was bought by Ford Motor Sport as a centre for vehicle development. The use of the airfield for mineral extraction began in 1990.

## 2.4 Previous archaeological discoveries within and around Bulls Lodge Quarry

In the early 1990s an archaeological excavation found prehistoric remains and a late Roman villa at a neighbouring quarry at Great Holts Farm, immediately east of the quarry. The prehistoric remains comprised Neolithic finds, Late Neolithic/Bronze Age ring-ditches, Late Bronze Age pits, and an Early Iron Age structure (Germany 2003). In 1990, a metal-detectorist discovered a Late Bronze Age spearhead in the area between the quarry and Great Holts Farm (Gilman and Bennett 1991). The Roman villa at Great Holts Farm is dated to the 3rd and 4th centuries, and was established within a landscape of agricultural fields and stock enclosures that had developed from the 2nd century onwards (Germany 2003).

The archaeological monitoring of topsoil removal at Bulls Lodge Quarry has taken place intermittently since the quarry first started to operate in 1990. The main archaeological discoveries made prior to 2007 comprise (Fig. 1):

■ To the south-east: possible prehistoric ditches and a trackway, a Late Neolithic/Bronze Age ring-ditch and an Early Bronze Age urn (Archer and Clarke 2007), and a Late Bronze Age cremation burial and pits (Germany 2007).

- To the south-east: a Late Iron Age/early Roman enclosure (Archer and Clarke 2007) and (to the south-east of that, outside the boundary of figure 1), a late Roman administrative building for a rural estate (Lavender 1993).
- To the east: a large, ditched enclosure containing a 12th/13th-century farmhouse, windmill and granary (Clarke 2003), medieval pits, trackway and enclosures, and a post-medieval/modern sequence of timber buildings (Germany 2007).

The survival of the archaeological remains within the area of the quarry is fragmentary, due to truncation by large-scale ground clearance and levelling by bulldozers during the construction of the World War II airfield.

#### 3.0 AIMS AND OBJECTIVES

The aim of the archaeological monitoring is to investigate and record archaeological remains within Bulls Lodge Quarry prior to their destruction by successive phases of mineral extraction. The long-term objective is to obtain a greater understanding of the prehistoric and historical development of the landscape within the area of the quarry.

#### 4.0 METHOD

The archaeological fieldwork was undertaken in accordance with the Institute of Field Archaeologists' *Standard and Guidance for Archaeological Field Evaluation* (IFA 1999), and the Association of Local Government Officers' *Standards for Field Archaeology in the East of England* (Gurney 2003). The ECC FAU is a registered archaeological organisation with the Institute of Field Archaeologists.

Two areas were inspected for archaeological features and finds following topsoil stripping (Fig. 1, A and B), covering 2.7ha and 5.2ha respectively. Both areas had previously been stripped by tracked excavators with broad toothless buckets. The locations of the archaeological features were plotted on a site plan related to the Ordnance Survey, using a Total Station Theodolite and a directional GPS with onboard map-based software.

All archaeological features were recorded, but excavation was highly selective and was focused on investigating concentrations of pits and other features suggesting areas of

occupation, and any ditches which were suspected of being older than the disemparkment of the New Hall deer park.

The ECC FAU uses its own recording system to record all identified archaeological deposits and features (ECC FAU 2006). Each context was individually numbered and was recorded on individual proforma sheets. Detailed plans of areas containing significant archaeological features were drawn at a scale of 1:20 and sections at a scale of 1:10. Monochrome and colour photographs were taken of significant features and of work in progress.

All artefacts were collected and recorded by context number. Bulk samples were taken from possible cremation burials and other features with burnt fills.

#### 5.0 FIELDWORK RESULTS

Ploughing and the construction of the World War II airfield had ensured that all the archaeological remains had been truncated by at least 0.3m. The features contained clayrich deposits derived from the surrounding natural Boulder Clay. Fieldwork data can be found in Appendix 1.

# **5.1** Area A (Figs 2 and 3)

Area A revealed the remains of a post-built structure, eleven pits, a gully, eight ditches and three cable trenches. The post-built structure, the gully and one of the pits are prehistoric. Most of the ditches are likely to have been in use following the disemparkment of the New Hall deer park from the 17th century onwards. It is assumed that the cable trenches were part of the World War II airfield.

The prehistoric building (270) was situated near the northern end of the area. It measured *c*. 4.5m wide and 8.25m long and was aligned north-west to south-east. Its remains consisted of two lines of closely-spaced post-holes with an average depth of 0.1m (221, 223, 225, 238, 240, 242, 246, 246, 257, 259 and 261). The south-western side of the structure was less complete, and its post-holes were only half as deep, probably because of uneven truncation. Two of the post-holes on the opposite side of the building contained circular post-pipes (244 and 250) with diameters of *c*. 0.2m. A 2.25m wide gap between post-holes 221 and 246 suggested an entranceway on the north-eastern side of the building. Post-holes 223 and 225 were cut by an elongated pit or post-hole (227) containing four pieces of worked flint and twenty-eight small fragments of prehistoric pottery; five of the sherds were from a Late

Bronze Age hooked-rim jar. Small amounts of prehistoric, probably Late Bronze Age, pottery were also present in post-holes 223, 238, 259 and 261. It is conjectured that the building was in use during the Late Bronze Age date and was slightly bow-sided.

Two pits or post-holes (252 and 254), which may have been associated with the building, were found near its south-eastern end. On the surfaces of both of these features were small amounts of worked flint and prehistoric pottery (finds context 256).

The only other datable prehistoric feature was a Late Bronze Age gully (268). The gully lay 70m south-west of the building and was associated with a small number of sherds of Late Bronze Age pottery.

Eight other pits lay scattered across the rest of area A (201, 204, 206, 212, 214, 227, 263 and 266). The majority of these features remain undatable because they contained no finds. Pit 266, the one exception to this, contained a small sherd of Roman pottery. Five of the pits contained dumps of charcoal from fires (201, 204, 206, 263 and 266). There was also a tiny amount of burnt bone in pit 206, which could have been either animal or human. The burnt material from pits 204 and 206 was wet-sieved and found to consist of fragments and flecks of seeds and/or grains and carbonised wood.

The other features comprised ditches (207, 217, 218/233, 229/231, 271, 272, 273 and 275) and modern trenches for cables (274, 276 and 277). The majority of the ditches were distinctively straight-sided and regular and are probably the remains of post-medieval/modern field ditches. None of them contained any finds. The Ordnance Survey 1st edition (1861 to 1876) records ditch 207. From the field pattern recorded by the OS 1st edition it seems likely that ditch 272 was a former boundary division between two post-medieval/modern fields. Ditches 217, 273 and 218/233 run perpendicular to these, and are likewise assumed to be post-medieval/modern. Two sides of a post-medieval field are speculated to be represented by ditches 271 and 275. Ditch 229/231, immediately west of the Late Bronze Age building, may have been in use prior to the formation of the New Hall deer park. It was cut by ditches 272 and 218/233 and in contrast to the others was distinctively curved.

# **5.2 Area B** (Fig. 1)

Area B contained no visible archaeological remains other than a post-medieval/modern field ditch. The ditch was not recorded or investigated.

#### 6.0 FINDS

Small groups of finds were recovered from a total of fifteen contexts. All of the material has been counted and weighed, in grams, by context; full details can be found in Appendix 2. The finds are described by category below.

#### **Pottery**

Pottery, almost all of prehistoric date, was recovered from eight contexts. The exception is a tiny sherd of Roman grey ware which came from the fill of pit 266, unfortunately not closely datable within the Roman period. The prehistoric pottery is reported on below.

### Prehistoric pottery by N.J. Lavender

A total of fifty-two sherds (170g) of prehistoric pottery was recovered from a group of fourteen post-holes, probably representing a small rectangular building. Six sherds (surface finds 256) came from the area around post-holes 252 and 254; the rest all came from the fills of six of the post-holes. The material has been recorded using a system developed for prehistoric pottery in Essex (Brown 1988; details in archive).

#### The fabrics present are:

Fabric		Sherd	Weight	%sherd	%weight
D	Flint, S-L 2 poorly sorted.	50	159	96	93.5
M	Grog, often with some sand or flint and occasional				
	small rounded or sub-angular voids	2	11	4	6.5
		52	170	100	100

#### Where:

S= less than 1mm diameter

M= 1-2mm diameter

L= more than 2mm diameter

1= less than 6 per cm<sup>2</sup>

2= 6-10 per cm<sup>2</sup>

3= more than 10 per cm<sup>2</sup>

With the exception of two joining body sherds, the entire assemblage comprises material in Fabric D. Generally the pottery was quite fragmentary, with an average sherd weight of only 3.2g. There are, however a number of larger sherds, several of which were capable of refitting. There is very little sign of abrasion on any of the pottery.

From the fill of large pit or post-hole 227 came five joining sherds from the rim of a hookedrim jar, belonging to the Late Bronze Age. Further small sherds, from other post-holes, possibly belong to this jar on the basis of colour and wall-thickness, though they do not join. A second rim, comprising two joining sherds, comes from a small, fine open bowl or large cup, some 120mm in diameter. These were recovered from the fill of gully 268.

The pottery appears to come from a small, probably domestic, plain assemblage as defined by Barrett (1980). Late Bronze Age pottery occurs frequently in and around the Chelmer Valley, notably at the two circular enclosures at Springfield Lyons (Brown in prep) and Great Baddow (Brown 1994); and more locally at Great Holts Farm (Brown 2003) and the Boreham A12 Interchange (Brown 1999). The last named produced at least three hooked-rim jars.

#### Worked flint by Hazel Martingell

A total of nine worked flints was examined. There is one scraper, four blades and four flakes. One of the flakes and one of the blades are patinated. The scraper (fill 262 of posthole 261) is most unusual. It is made on a rough block of flint that has had three good blades removed from one prepared surface. On the opposite convex edge, there is good steep invasive scraper retouch. This is a difficult piece to date; it is possible that the artefact began as an early Neolithic core and was then converted to a scraper in the later Neolithic. Subsequently, some surfaces were damaged, altering its appearance. The four blades and three of the flakes are undatable; the patinated pieces should be earlier than the unpatinated. The surface-find flake (256) is rough and may be later prehistoric in date.

#### Baked clay

Two contexts produced fragments of baked clay. The fill of post-hole 248 contained two very small undiagnostic pieces, but a more substantial fragment came from the fill of fire-pit 214. This has a groove on one surface and may represent part of a loom weight of prehistoric date. The piece was accompanied by a quantity of burnt flints.

#### Metalwork

A single iron nail was recovered from fill 208 of ditch 207. The nail is handmade and thus not modern, although the ditch is considered to be a relatively recent feature.

#### **Burnt bone**

Two undated pits (204 and 206) were presumed to be cremation burials, although only the latter subsequently produced burnt bone (weight 10g). The fragments are small and undiagnostic and could be either animal or human in origin.

#### **Environmental material**

Bulk soil samples were taken from the fills of two presumed cremation burials (Fig. 2, 204 and 206) for the purposes of environmental analysis. Full details can be found in Appendix 2. Both samples were processed by wet-sieving with flotation using a 0.5mm mesh and collecting the flotation fraction (flot) on a 0.5mm sieve. The residues were then dried and separated into coarse and fine fractions using 4mm and 2mm sieves. The material in the coarse fraction (>4mm) was sorted by eye and artefacts and environmental material extracted and bagged separately. The fine fractions were saved but not sorted. The flots were also dried and bagged by context. Retrieved artefacts and ecofacts were recorded by count and weight, where possible, and these details added to the quantification table in Appendix 2. Both samples produced flots which contained small quantities of charcoal, including carbonised seeds. These were considered to be unsuitable for submission for expert identification since the features are undated.

#### **Comments on the Assemblage**

A range of mainly prehistoric finds was recorded, which complements previous material found at Bulls Lodge Quarry (Archer and Clarke 2007). Further work will not be required on any of the material. All of the finds should be retained, except for the iron nail. The finds occupy less than one box.

#### 7.0 CONCLUSIONS

Building 270 and gully 268 are probably the remains of a small Late Bronze Age settlement. The discovery of this settlement supplements an existing corpus of Late Bronze Age sites and finds spots which have already been found and recorded within the area of the Chelmer Valley (Brown and Lavender 1994; Brown 2001). It is speculated that the building had been part of a small farm within a dispersed and extensive landscape of small settlements and fields. A more complete example of one of these settlements is perhaps represented by the Late Bronze Age enclosed farmstead, which was found at Broomfield (Atkinson 1985). Settlements further up the settlement hierarchy, akin to the Springfield-Lyons type enclosures at Springfield Lyons and Great Baddow (Buckley and Hedges in prep; Brown and Lavender 1994) are also likely to have been present. Religious and ritual activity was probably a significant component of everyday life during that period, and is probably implied by the discovery of the Late Bronze Age shrine/temple at Broads Green (Brown 1988b). The Late Bronze Age cremation burial, which was revealed by the quarry in 2006 (Fig. 1) (Germany 2007), and the Late Bronze Age placed deposits, which were found at Great Holts

Farm in 1993 (Germany 2003) are two other manifestations of Late Bronze Age ritual behaviour. Prehistoric monuments, representing the ritual activity of an earlier age, are common within the Chelmer Valley, and include the Late Neolithic/Bronze Age ring-ditch, which was uncovered by the quarry in 2003 (Fig. 1) (Archer and Clarke 2007).

#### **ACKNOWLEDGEMENTS**

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# **APPENDIX 1: CONTEXT DATA**

Dimensions = length x width x depth

200 201 202 203 204	Category Deposit Pit Deposit Deposit Pit Pit	Description Single fill of 200 Irregular-shaped pit with variable sides. 1.22m x 1.06 x 0.38. Filled by 200 Top fill of pit 204. Charcoal rich	Undatable Undatable	
201 202 203 204	Pit Deposit Deposit	Irregular-shaped pit with variable sides. 1.22m x 1.06 x 0.38. Filled by 200		
203	Deposit	Top fill of pit 204 Chargoal rich	<u> </u>	
204		1 Top IIII of pit 204. Charcoal fich	Undatable	
	D:+	Primary fill of pit 204	Undatable	
205	PII	Oval pit with steep sides and flat base. 0.42m x 0.38m x 0.29m. Filled by 202 and 203	Undatable	
	Deposit	Single fill of pit 206. Charcoal rich	Undatable	
	Pit	Oval pit with gradual sides and a slightly concave base. 0.42m x 0.35m x 0.06m	Undatable	
	Ditch	0.85m+ x 1.47m+ x 0.63m+ (section). Not fully excavated. Filled by 208 to 211	Post-medieval / modern	
208	Deposit	Earliest recorded fill of ditch 207	Post-medieval / modern	
209	Deposit	Secondary fill of ditch 207. Frequent charcoal flecks	Post-medieval / modern	
210	Deposit	Third fill of ditch 207	Post-medieval / modern	
211	Deposit	Top fill of ditch 207	Post-medieval / modern	
212	Deposit	Small spread of charcoal impregnated clay. 1.05m x 0.75m x 0.03m	Undatable	
213	Deposit	Same as 212	Undatable	
214	Pit	Oval pit with moderately sloping sides and a rough concave base. 1.00m x 0.66m x 0.11m. Filled by 215	Undatable	
	Deposit	Single fill of pit 214	Undatable	
	Deposit	Single fill of ditch 217	Undatable	
217	Ditch	0.52m x 1.5m x 0.50m (section). Moderately sloping sides, concave base. Filled by 216	Undatable	
218	Ditch	0.92m x 1.45m x 0.49m (section). Moderate to steep sides, slightly concave base. Filled by 219 and 220	Post-medieval / modern	
219	Deposit	Primary fill of ditch 218	Post-medieval / modern	
220	Deposit	Top fill of ditch 218 Post-n moder		
221	Post-hole	Oval post-hole. Gradual sides, flat base. 0.9m x 0.65m x 0.11m. LBA Filled by 222		
222	Deposit	Single fill of post-hole 221	LBA	
223	Post-hole	Oval post-hole. Moderately sloping sides. Flat base. 0.9m+ x 0.82m x 0.15m. Filled by 224	LBA	
224	Deposit	Single fill of post-hole 223. Cut by pit 227	LBA	
225	Post-hole	Oval post-hole. Gradually sloping sides, slightly concave base. 1.00m+ x 0.9m x 0.10m. Filled by 226. Cut by pit 227	LBA	
226	Deposit	Single fill of post-hole 225. Cut by pit 227	LBA	
227	Pit	Elongated oval pit. Moderately sloping sides, slightly concave base. 1.8m x 0.83m x 0.14m. Cuts 224and 226. Filled by 228	LBA	
	Deposit	Single fill of pit 227	LBA	
229	Ditch	0.99m x 0.91m x 0.22m (section). Moderately sloping sides, flat base. Filled by 230	Undatable	
230	Deposit	Single fill of 229	Undatable	
231	Ditch	1.05m x 0.46m x 0.2m (section). Moderately sloping sides, concave base. Filled by 232	Undatable	
	Deposit	Single fill of ditch 231. Cut by 233	Undatable	
	Ditch	1.35m x 0.83m x 0.38m+ (section). Moderately sloping sides. Base not exposed. Filled by 234 and 235. Cuts 232	Post-medieval / modern	
234	Deposit	Primary fill of ditch 233	Post-medieval / modern	
235	Deposit	Top fill of ditch 233. Cut by pit 236	Post-medieval / modern	
236	Pit	Oval pit. Gradually sloping sides, slightly concave base. 0.8m x 0.63m x 0.11m. Filled by 237. Cuts 235	Post-medieval / modern	
237	Deposit	Single fill of pit 236	Post-medieval / modern	

Post-hole   Oval post-hole. Gradually sloping sides, slightly concave base.   LBA							
Deposit   Single fill of post-hole 238   LBA	238	Post-hole		LBA			
Post-hole	239	Deposit		LBA			
Deposit   Single fill of post-hole 240   LBA			Oval post-hole. Gradually sloping sides, flat base. 0.88m x 0.7m	LBA			
0.55m x 0.19m. Filled by 243. Contains post-pipe 244	241	Deposit		LBA			
Post-pipe by 245	242	Post-hole		LBA			
by 245	243			LBA			
Post-hole   Oval post-hole. Gradually sloping sides, slightly concave base.   LBA	244	Post-pipe	Circular post-pipe in post-hole 242. 0.2m x 0.2m x 0.19m. Filled LBA by 245				
Deposit   Single fill of post-hole 246   LBA	245						
Post-hole   Oval post-hole, Moderately sloping sides, concave base, 1.1m x   0.86m x 018m. Filled by 249. Contains post-pipe 250   LBA			Oval post-hole. Gradually sloping sides, slightly concave base. LBA				
Deposit   Single fill of post-hole 248   Deposit   Deposit   Single fill of post-hole Gradually sloping sides, flat base							
Post-pipe   Circular post-pipe in post-hole 248. 0.21m x 0.21m x 0.18m.   LBA	248	Post-hole		LBA			
Filled by 251 Deposit Single fill of post-pipe 250 Pit Rectangular pit or post-hole. Gradually sloping sides, flat base 0.7m x 0.66m x 0.06m. Filled by 253. Uncertain stratigraphic relationship with pit 254 Pit Oval pit or post-hole. Gradually sloping sides, slightly concave base 1.1m x 1.03m x 0.1m. Filled by 255. Uncertain stratigraphic relationship with pit 252 Single fill of pit 254 Single fill of pit 254 Single fill of pit 254 Surface finds from pits 252 and 254 LBA LBA LBA LBA Solvan x 0.06m. Filled by 257 LBA							
Pit   Rectangular pit or post-hole. Gradually sloping sides, flat base   0.7m x 0.66m x 0.06m. Filled by 253. Uncertain stratigraphic relationship with pit 254	250		Filled by 251				
Deposit   Single fill of pit 252   7LBA							
Pit	252	Pit	0.7m x 0.66m x 0.06m. Filled by 253. Uncertain stratigraphic	?LBA			
base 1.1m x 1.03m x 0.1m. Filled by 255. Uncertain stratigraphic relationship with pit 252  255 Deposit Single fill of pit 254 ?LBA  256 Artefacts Surface finds from pits 252 and 254 LBA  257 Post-hole Oval post-hole. Gradually sloping sides, concave base 0.58m x 0.46m x 0.06m. Filled by 257  258 Deposit Single fill of post-hole 257 LBA  259 Post-hole Oval post-hole. Gradually sloping sides, flat base 0.84m x 0.6m x 0.03m. Filled by 260  260 Deposit Single fill of post-hole 259 LBA  261 Post-hole Oval post-hole 259 LBA  262 Deposit Single fill of post-hole 259  263 Pit Oval pit. Moderately sloping sides, concave base 0.72m x 0.56m x 0.1m. Filled by 262  264 Deposit Single fill of post-hole 261 LBA  265 Deposit Primary fill of pit 263 LBA  266 Pit Oval pit. Gradually sloping sides, concave base. 0.66m x 0.58m x 0.14m. Filled by 267  267 Deposit Single fill of pit 263. Charcoal rich Undated  268 Gully Serva 0.4m x 0.07m. Gradually sloping sides, concave base. Roman+  269 Deposit Single fill of pit 266  270 Structure Post-built structure 4.5m x 8.25m. Consists of post-holes 221, 223, 225, 238, 240, 242, 246, 248, 257, 259 and 261 and post-pipes 244 and 250. May also include pits/post-holes 252 and 254  271 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 271 Post-medieval / modern  272 Ditch Not excavated. Post-waved Modern  273 Ditch Not excavated. Post-waved Modern  274 Cable trench Not excavated  Not excavated. One man 276 Modern  Not excavated  Not excavated. Post-waved Modern	253	Deposit					
255DepositSingle fill of pit 254?LBA256ArtefactsSurface finds from pits 252 and 254LBA257Post-holeOval post-hole. Gradually sloping sides, concave base 0.58m x 0.46m x 0.06m. Filled by 257LBA258DepositSingle fill of post-hole. 257LBA259Post-holeOval post-hole. Gradually sloping sides, flat base 0.84m x 0.6m x 0.03m. Filled by 260LBA260DepositSingle fill of post-hole 259LBA261Post-holeOval post-hole. Gradually sloping sides, concave base 0.72m x 0.56m x 0.1m. Filled by 262LBA262DepositSingle fill of post-hole 261LBA263PitOval pit. Moderately sloping sides, concave base. 0.66m x 0.58m x 0.14m. Filled by 264 and 265LBA264DepositPrimary fill of pit 263LBA265DepositTop fill of pit 263. Charcoal richUndated266PitOval pit. Gradually sloping sides, flat base.0.6m x 0.55m x 0.04m. Filled by 267Roman+267DepositSingle fill of pit 266Roman+268Gully2.25m x 0.4m x 0.07m. Gradually sloping sides, concave base. Filled by 269LBA270StructurePost-built structure 4.5m x 8.25m. Consists of post-holes 221, 223, 225, 238, 240, 242, 246, 248, 257, 259 and 261 and post-pipes 244 and 250. May also include pits/post-holes 252 and 254LBA271DitchNot excavated. Uncertain stratigraphic relationship with ditch 272Post-medieval / modern273DitchNot excavated. Uncertain stratigraphic relationship with ditc	254	Pit	base 1.1m x 1.03m x 0.1m. Filled by 255. Uncertain stratigraphic	?LBA			
Deposit   Depo				?LBA			
258 Deposit Single fill of post-hole 257 LBA 259 Post-hole Oval post-hole Gradually sloping sides, flat base 0.84m x 0.6m x 0.03m. Filled by 260 260 Deposit Single fill of post-hole 259 LBA 261 Post-hole Oval post-hole. Gradually sloping sides, concave base 0.72m x 0.56m x 0.1m. Filled by 262 262 Deposit Single fill of post-hole 261 LBA 263 Pit Oval pit. Moderately sloping sides, concave base 0.66m x 0.58m x 0.14m. Filled by 264 and 265 264 Deposit Top fill of pit 263 LBA 265 Deposit Top fill of pit 263. Charcoal rich Undated 266 Pit Oval pit. Gradually sloping sides, flat base 0.6m x 0.55m x 0.04m. Filled by 267 267 Deposit Single fill of pit 266 268 Gully 2.25m x 0.4m x 0.07m. Gradually sloping sides, concave base. Filled by 269 269 Deposit Single fill of gully 268 270 Structure Post-built structure 4.5m x 8.25m. Consists of post-holes 221, 223, 225, 238, 240, 242, 246, 248, 257, 259 and 261 and post-pipes 244 and 250. May also include pits/post-holes 252 and 254 271 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 271 Post-medieval / modern 272 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 271 Post-medieval / modern 273 Ditch Not excavated. Not excavated. 9Post-medieval / modern 274 Cable trench Not excavated. 9Same as 276 Modern 275 Cable trench Not excavated Modern							
Post-hole			0.46m x 0.06m. Filled by 257				
Deposit   Single fill of post-hole 259   LBA							
Post-hole   Oval post-hole. Gradually sloping sides, concave base 0.72m x   0.56m x 0.1m. Filled by 262			0.03m. Filled by 260				
Deposit   Single fill of post-hole 261   LBA							
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Deposit   Primary fill of pit 263   LBA							
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Pit Oval pit. Gradually sloping sides, flat base.0.6m x 0.55m x 0.04m. Filled by 267  Deposit Single fill of pit 266 Roman+  268 Gully 2.25m x 0.4m x 0.07m. Gradually sloping sides, concave base. Filled by 269  Deposit Single fill of gully 268 LBA  Structure Post-built structure 4.5m x 8.25m. Consists of post-holes 221, 223, 225, 238, 240, 242, 246, 248, 257, 259 and 261 and post-pipes 244 and 250. May also include pits/post-holes 252 and 254  Ditch Not excavated. Uncertain stratigraphic relationship with ditch 272 Post-medieval / modern  Ditch Not excavated. Uncertain stratigraphic relationship with ditch 271 Post-medieval / modern  Not excavated Post-medieval / modern  Not excavated Post-medieval / modern  Post-medieval / modern  Cable trench Not excavated Post-medieval / modern  Not excavated Post-medieval / modern  Not excavated Post-medieval / modern							
Deposit   Single fill of pit 266   Roman+							
268 Gully 2.25m x 0.4m x 0.07m. Gradually sloping sides, concave base. Filled by 269  269 Deposit Single fill of gully 268 270 Structure Post-built structure 4.5m x 8.25m. Consists of post-holes 221, 223, 225, 238, 240, 242, 246, 248, 257, 259 and 261 and post- pipes 244 and 250. May also include pits/post-holes 252 and 254  271 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 272 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 271 Post-medieval / modern  273 Ditch Not excavated Not excavated Post-medieval / modern  274 Cable trench Not excavated Modern			0.04m. Filled by 267				
Filled by 269  Deposit Single fill of gully 268  EBA  The structure Post-built structure 4.5m x 8.25m. Consists of post-holes 221, 223, 225, 238, 240, 242, 246, 248, 257, 259 and 261 and post-pipes 244 and 250. May also include pits/post-holes 252 and 254  Ditch Not excavated. Uncertain stratigraphic relationship with ditch 272 modern  Ditch Not excavated. Uncertain stratigraphic relationship with ditch 271 post-medieval / modern  Ditch Not excavated Post-medieval / modern  Not excavated Post-medieval / modern  Cable trench Not excavated Post-medieval / modern  Not excavated Post-medieval / modern  Not excavated Post-medieval / modern  Modern  Modern							
270 Structure Post-built structure 4.5m x 8.25m. Consists of post-holes 221, 223, 225, 238, 240, 242, 246, 248, 257, 259 and 261 and post-pipes 244 and 250. May also include pits/post-holes 252 and 254  271 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 272 Post-medieval / modern  272 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 271 Post-medieval / modern  273 Ditch Not excavated Post-medieval / modern  274 Cable trench Not excavated. ?Same as 276 ?Modern  Not excavated Modern		,	Filled by 269				
223, 225, 238, 240, 242, 246, 248, 257, 259 and 261 and post- pipes 244 and 250. May also include pits/post-holes 252 and 254  271 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 272 Post-medieval / modern  272 Ditch Not excavated. Uncertain stratigraphic relationship with ditch 271 Post-medieval / modern  273 Ditch Not excavated Post-medieval / modern  274 Cable trench Not excavated. ?Same as 276 ?Modern  Not excavated Modern							
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modern   Post-medieval / modern   Post-medie		Ditch					
274Cable trenchNot excavated. ?Same as 276?Modern275Cable trenchNot excavatedModern	272	Ditch	Not excavated. Uncertain stratigraphic relationship with ditch 271				
275 Cable trench Not excavated Modern	273	Ditch	Not excavated				
		Cable trench	Not excavated. ?Same as 276				
276   Cable trench   Not excavated. ?Same as 276   Modern							
	276	Cable trench	Not excavated. ?Same as 276	Modern			

# **APPENDIX 2: FINDS DATA**

Finds data

Context	Feature	Count	Weight	Description	Date
202	204	1	4	Flint flake from sample 2	-
		2	152	Burnt flints from sample 2	-
		-	20	Charcoal from sample 2	-
205	206	-	10	Burnt bone fragments from sample 3	-
		-	2	Charcoal from sample 3	-
209	207	1	10	Iron nail, handmade (so not modern)	-
215	214	1	-	Charcoal (Discarded)	-
		6	60	Burnt flints	-
		1	64	Baked clay with ?groove on one surface	-
220	218	1	2	Flint flake	-
222	221	1	10	Flint flake	-
224	223	1	1	Pottery; chip	Prehistoric
228	227	-	1	Charcoal (Discarded)	-
		4	14	Flint flakes and blades	-
		28	116	Pottery; rim, body sherds and crumbs  Prehisto	
239	238		1	Charcoal (Discarded)	
239	236	- 1	1 2	Pottery; body sherd	- Prehistoric
				Follery, body Sherd	Fiellistolic
249	248	2	6	Baked clay	
243	240			Daked clay	
256	Finds	1	18	Flint flake	-
		5	28	Pottery; body sherds	Prehistoric
260	259	2	4	Pottery; joining body sherds	Prehistoric
				3 , , ,	
262	261	1	72	Flint scraper	-
		3	8	Pottery; body sherds Prehistor	
267	266	1	1	Pottery; body sherd, sandy grey ware Roman	
269	268	1	6	Flint flake	-
		8	14	Pottery; rim, body sherds and crumbs, fine fabric	Prehistoric

Bulk sample data

Sample	Context	Feature	Bulk weight	Bone	Burnt bone	Charcoal	Seeds/ Grain	Molluscs
2	202	Pit 204	8kg			Х	Х	
3	205	Pit 206	10kg		Х	Х	Х	

X denotes presence

Worked flint catalogue

Context	Feature	Count	Weight	Description	Date
220	218	1	2	Blade, primary	
222	221	1	10	Flake, secondary, patinated	
228	227	4	14	Two flakes, secondary, sharp Bladelet, tertiary Bladelet, tertiary, patinated	
256	Finds	1	18	Flake, tertiary, rough	Iron Age
262	261	1	72	Scraper on a secondary rough block, good steep invasive retouch on convex edge opposite three blade removals, ?failed core	?Neolithic
269	268	1	6	Blade, tertiary, sharp	

# Flint data

Context	Feature	Count	Weight	Description	
202	204	1	4	Flint flake from sample 2	
		2	152 Burnt flints from sample 2		
215	214	6	60	Burnt flints	
220	218	1	2	Flint flake	
222	221	1	10	Flint flake	
228	227	4	14	14 Flint flakes and blades	
256	Finds	1	18	18 Flint flake	
262	261	1	72	Flint scraper	
269	268	1	6	Flint flake	
		18	338		
		10	126	Flints	
		8	212	Burnt flints	

#### **APPENDIX 3: ESSEX HISTORIC ENVIRONMENT SUMMARY**

Site name/Address: Bulls Lodge Quarry (former Boreham Airfield), Boreham		
Parish: Boreham	District: Chelmsford	
<b>NGR:</b> TL 73438 11968	Site Code: BOAF 05	
Type of Work: Archaeological monitoring	Site Director/Group:	
<b>Date of Work:</b> 23/8/07 to 24/8/07 and 26/11/07 to 30/11/07	Size of Area Investigated: Monitoring area: 7.9ha	
Location of Finds/Curating Museum: Chelmsford	Client: Hanson Aggregates	
Further Seasons Anticipated?: Yes	Related EHR Nos.:	

# Final Report:

Essex Archaeology and History (Summary and full report)

# Periods represented:

Prehistoric Post-medieval Modern

#### SUMMARY OF FIELDWORK RESULTS:

Archaeological remains, including those of a Late Bronze Age building, were discovered following topsoil stripping in advance of mineral extraction at Bulls Lodge Quarry, Boreham. The building was defined by two rows of post-holes and measured 4.25m by 8.25m. It was slightly bow-sided, and possibly had a doorway on its north-eastern side. The investigation also found a small quantity of prehistoric worked flint, a Late Bronze Age gully, undatable pits, and post-medieval/modern field ditches. The Late Bronze Age features possibly comprise the remains of a small settlement.

#### Previous Summaries/Reports:-

Archer, J. & Clarke, R. 2007: 'A Late Iron Age and early Roman enclosure at Bulls Lodge Quarry, Boreham Airfield: excavation 2003'. *Essex Archaeology and History* **36** 

Germany, M. 2007: Bulls Lodge Quarry, Former Boreham Airfield, Essex: Archaeological Monitoring and Excavation, 2005 and 2006. ECC FAU report **1704** 

Clarke, R. 2003: A medieval moated site and windmill: excavations at Boreham Airfield, Essex 1996. E. Anglian Occ. Paper **11** 

Author of Summary: Mark Germany	Date of Summary: February 2008

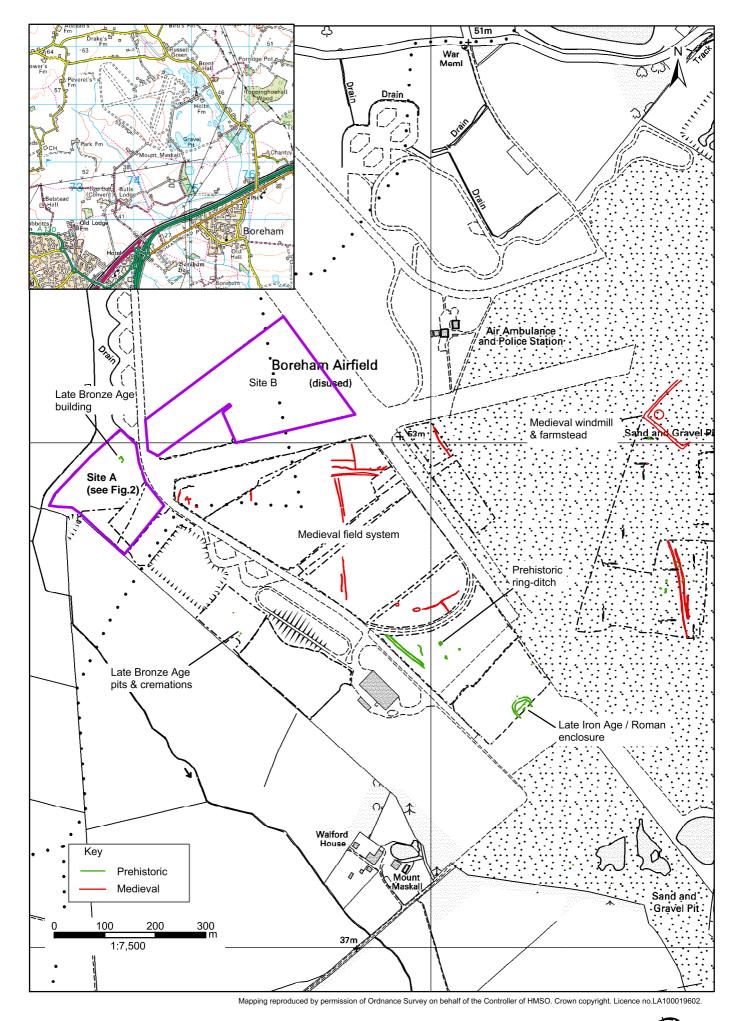


Fig.1. Location plan

Essex County Council Field Archaeology Unit

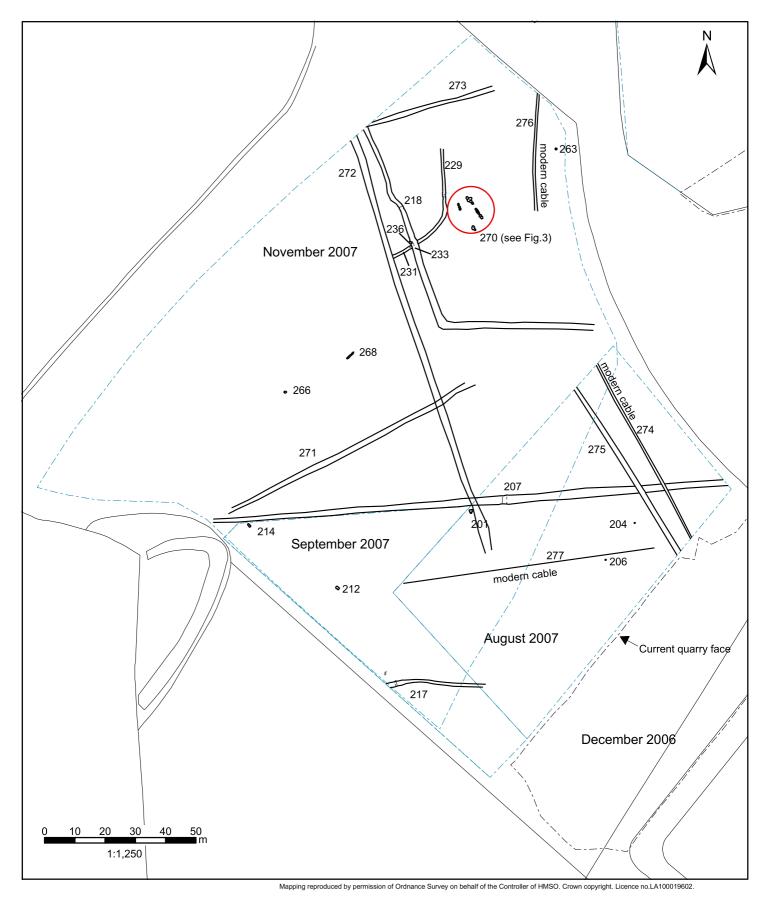


Fig.2.Excavated features



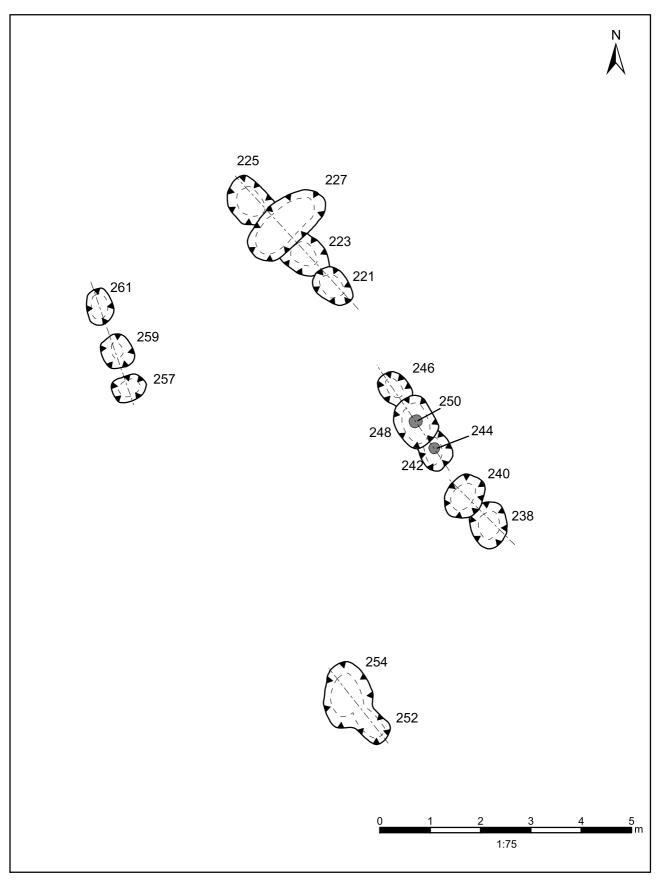




Fig.3. Late Bronze Age building 270