Archaeological Evaluation of

## TRISAIL TOWERS ELSENHAM

For MLM Environmental
Michael Bamforth BSc AIFA
L-P:ARCHÆOLOGY

## Archaeological Evaluation of

## TRISAIL TOWERS ELSENHAM

| Client: | MLM Environmental |
| :--- | :--- |
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| NGR: | 555080, 225404 |
| Planning App: | Pre-planning |
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## L~P:ARCHÆOLOGY

A trading name of the $L-P$ : Partnership Ltd.
The Truman Brewery | 9| Brick Lane | London, El 6QL | +44 [0]20 77706045 | +44 [0]20 $769 \mid 7245$

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# Abstract 

This report concerns the results of an archaeological evaluation on the area of the proposed Trisail Towers development, Elsenham. Nine trenches were excavated across the area of proposed development, to investigate the nature, extent and preservation of archaeological remains.

Several Late Neolithic or Early Bronze Age flints were recovered from the west of the development area. A high density of largely undated archaeological remains were noted in the centre of the development area. These included ditches, pits and post holes. One group of three post holes may represent a four posted structure of Bronze or Iron Age date. An earlier subdivision of the landscape, probably post-medieval in date has been identified in the form of several parallel ditches, aligned perpendicular to the modern road. A small palaeochannel was recorded running through the development area. Several undated ditches were recorded over the rest of the development area.

It is likely that the evaluation has encountered the edge of a prehistoric settlement. However, the lack of dateable material precludes a firmer interpretation.

## 1. Introduction and Scope of Study

1.1.This archaeological evaluation report has bee prepared by Michael Bamforth of L - P : Archaeology for MLM Environmental (MLME).
1.2.The fieldwork took place from the 19th of June to the 3rd of July 2008. The site director was Michael Bamforth of L - P : Archaeology.
1.3.The report considers land at Elsenham Estate, Uttlesford. The whole site occupies an area of approximately 16 hectares and is centred at National Grid Reference 555080, 225404 (Figure 1).
1.4.The local planning authority is Uttlesford District Council (UDC) who take archaeological advice from Essex County Council. A planning application for the construction of a commercial development is currently being prepared.
1.5.The purpose of this report is to further inform the archaeological potential of the proposed development site and to assess the impact of the proposed development on the site.
1.6.The trench plan and methodology were agreed with UDC and MLME in the Specification for Archaeological Evaluation (CAMPION 2008).

## 2. Planning Background

2.1.In November 1990 the Department of the Environment issued PPG 16, "Archaeology and Planning". This document provides guidance for planning authorities,property owners, developers and others on the preservation and investigation of archaeological remains.
2.2.In considering any planning application for development the advisor to the local planning authority is bound by the policy frameworks provided by Planning Policy Guidance Note 16 (PPG 16), and the policies within the borough's Local Plan (adopted 1998).
2.3.The relevant policy contained within the policy is as follows:

## POLICY HE6


#### Abstract

DEVELOPMENT WHICH WOULD ADVERSELY AFFECT ARCHAEOLOGICAL REMAINS OF LESS THAN NATIONAL MPORTANCE WILL NOT BE PERMITTED UNLESS:- THE APPLICATION IS SUPPORTED BY THE RESULTS OF ARCHAEOLOGICAL ASSESSMENT AND, WHEN JUSTIFIED,ARCHAEOLOGICAL EVALUATION; AND WHEN WARRANTED BY THEIR INTRINSIC VALUE, THE REMAINS ARE PRESERVED IN SITU; OR IN OTHER CASES, ARRANGEMENTS HAVE BEEN MADE FOR EXCAVATION AND RECORDING THE REMAINS IN ACCORDANCE WITH POLICY HE7


2.4.The archaeological desk-based baseline study, undertaken for the Environmental Impact Assessment, has shown that the site has a moderate potential for archaeological remains from the Bronze Age, Roman, Medieval and Post-Medieval periods. In consideration of the above policy, it was therefore agreed that a programme of archaeological evaluation would be carried out on site, so that a detailed methodology for mitigating the archaeology could be agreed, if required.
2.5.The site does not fall within an area of 'Local Archaeological Significance' and there are no Scheduled Ancient Monuments or sites of national importance known on the study site.

## 3. Geology and Topography

### 3.1.GEOLOGY

3.1.1. The BGS Dataindex (HTTP://WWW.BGS.AC.UK/GEOINDEX/INDEX.HTM) details that the site sits on an area of glacial silts, sands and gravels with a fair depth of boulder clay. During the evaluation, boulder clay was the predominant form of material encountered. The boulder clay was mottled with pockets of siltier clay, often with a darker, redder hue. The latter material is probably the result of cryoturbation.

### 3.2.TOPOGRAPHY

3.2.1. The site is a mixture of hard standing, farmland and scrubland.
3.2.2. The development area covers approximately 16 hectares and is bounded to the north by Hall Road, the west by Green Street, with fields to the east (Figure 2).
3.2.3. The site is in close proximity to Stansted Airport, which lies to the south of the development area.

### 3.3.PROPOSED GROUNDWORKS

3.3.1. The proposed groundworks consist of the erection of three office towers with associated car parks and landscaping (Figure 2).

## 4. Archaeological and Historical Background

TIMESCALES USED IN THIS REPORT:

| PERIOD | FROM | TO |
| :--- | :---: | :--- |
| PREHISTORIC |  |  |
| PALAEOLITHIC | 450,000 | $12,000 \mathrm{BC}$ |
| MESOLITHIC | 12,000 | $4,000 \mathrm{BC}$ |
| NEOLITHIC | 4,000 | $1,800 \mathrm{BC}$ |
| BRONZE AGE | 1,800 | 600 BC |
| IRON AGE | 600 | 43 AD |
| HISTORIC | 43 |  |
| ROMAN | 410 | 410 AD |
| EARLY MEDIEVAL | 1066 | 1066 AD |
| MEDIEVAL | 1485 | PRESENT |
| POST MEDIEVAL |  |  |

### 4.1.ARCHAEOLOGICAL BACKGROUND

4.1.1. A brief summary of the sites archaeological background is given below. This is intended as an outline only. A full appraisal of the sites archaeological background was undertaken as an archaeological baseline study in support of the Environmental Impact Assessment and can be seen therin (YOUNG 2008)

## PALAEOLITHIC AND MESOLITHIC

4.1.2. There are no records of Palaeolithic or Mesolithic material recorded in the Essex Historic Environment Record (EHER) within a 1 km radius around the site area.
4.1.3. The nearby River Stort has yielded some Palaeolithic and Mesolithic remains and it seems likely that any activity in the area during these periods would have been situated some distance away perhaps around the terrace gravels of the Stort valley.

## NEOLITHIC

4.1.4. The EHER records one unstratified find dating to this period which refers to
the discovery of a Neolithic polished axehead at Elsenham (MEX16210), no further details are given with the record and no other records are noted for the area.
4.1.5. In the wider area some limited evidence for Neolithic settlement is known from the boulder clay in the region and from the Stansted Airport Project.

## BRONZE AGE

4.1.6. The EHER does not record any remains dating to this period within the 1 km search radius
4.1.7. However it should be pointed out that ongoing excavations at Stansted have revealed significant Bronze Age remains indicating that the site area is located within a wider landscape clearly exploited during the Bronze Age period. Remains indicate occupation, farming and ritual activity was taking place

## IRON AGE

4.1.8. The EHER does not record any remains dating to this period with the 1 km search radius.
4.1.9. However as with the Bronze Age, ongoing excavations at Stansted have revealed significant Iron Age remains indicating that the site area is located within a wider landscape clearly exploited and settled during the Iron Age period. Remains indicate settlement, agricultural and ritual activity was taking place

## ROMAN

4.1.10.The EHER search returned several entries dating to the Roman period suggesting definite activity within the vicinity of the study area.
4.1.11.MEX28792 records the discovery of a surface scatter of Roman potsherds - the density of the scatters is thought to indicate the remains of a cemetery although without further fieldwork it is difficult to tell. These finds were during the Stansted fieldwalking project and were located in a field some 450 m to the south of the study site.

## SAXON/MEDIEVAL

4.1.12.The study site was located within the parish of Elsenham in this period. A small settlement exists at Elsenham, although the study site is located some distance to the south east of the main settlement and church.
4.1.13.It is thought that during the Saxon period the area of Elsenham and Takeley was densely wooded which is recorded in Domesday as being 'feeding between them 3500 swine'.
4.1.14.The church of St Mary's is located to the north of the study site, parts of the church date to the $12^{\text {th }}$ century although it has been subject to much alteration since (MEX16202). The church itself is situated some distance to the main settlement, which has led to suggestions that a deserted medieval village was located around the church (MEX16209), however there is no sound archaeological evidence to support this suggestion.
4.1.15.The manor at Elsenham was held by the Baron of Folkestone in Kent at the time of Domesday. It is not certain where the original manor house was located but a later house was built, known as New House in proximity to the church.

## POST MEDIEVAL

4.1.16.The records contained within the EHER for the Post Medieval period primarily relate to farms and buildings in the area of the study site reflected the nature of the landscape during this period as one of dispersed settlement and agriculture with a small settlement to the north in Elsenham itself.
4.1.17.Also significant in the landscape during this period are the grounds of Elsenham Hall which are located to the north of the study site adjacent to the road. The house itself dates to the $19^{\text {th }}$ century and is a listed building.

## 5. Methodology

5.1.The evaluation was carried out in accordance with the Written Scheme of Archaeological Investigation (CAMPION 2008), as agreed by UDC and MLME.
5.2.The evaluation trenches were positioned as shown in FIGURE 2.
5.3.The trenches were excavated using a thirteen ton tracked excavator fitted with a 1.80 m wide ditching bucket.
5.4.A single environmental sample was recovered from a dated archaeological feature.
5.5.Full context, photographic and sample records were maintained and will be deposited with the full archive for the site.

## 6. Results

6.1.A total of nine trenches (TR1 - TR9) were excavated across the proposed development area. The trenches measured $1.8 \mathrm{~m} \times 50 \mathrm{~m}$, with the exception of TR9 that was shortened to 35 m due to the presence of several temporary buildings.
6.2.Results are given in ascending order of trench number. The heights of each end of the trench are given in metres Above Ordnance Datum (m OD), and the depth of the trench in metres below ground level (BGL) in the first descriptive paragraph. Heights of features are given in m OD in figures, and OD heights for points along all trenches are held in the archive. Deposits are given in (round brackets), cut features are given in [square brackets].
6.3.A firm, dark brow, silty-clay loam topsoil was recorded across the site. This varied in thickness between $0.25-0.35 \mathrm{~m}$.
6.4.Subsoil was recorded in several trenches, generally towards the east of the site. In the west of the development area, no sub-soil was present. However, a transitional layer of plough-disturbed, natural boulder clay was present in all the trenches that did not have a developed ploughsoil.
6.5.Natural boulder clay formed the base of the stratigraphic sequence in all the excavated trenches.
6.6.The disturbed nature of the natural boulder clay necessitated the excavation of test slots through any deposit that had the potential to represent archaeological remains. Features are therefore given a confidence rating ranging from high (high likelihood that this represents an archaeological feature), to low (probably a natural deposit or feature).

### 6.6.1. TRENCH 1 (TR1)

Trench plan figure 3, sections figure 4, 5, 6 .
6.6.2. TR1 was located in the northwestern corner of the development area, orientated on a west northwest - east southeast alignment. The base of the trench at the western end was cut to 108.30 m OD, and the eastern end to 109.13 m OD. The maximum depth of the trench was 0.42 m BGL. The features
are described from west to east.
6.6.3. The topsoil (101) had a maximum thickness of 0.24 m . A backed flint blade was recovered from this deposit. Below the topsoil was (102), a firm, mid brown silty-clay with very occasional chalk flecks. This deposit was seen throughout TR1 and had a maximum thickness of 0.20 m . This material lay above the natural boulder clay (103). Context (102) represents the upper horizon of the natural boulder clay that has been disturbed and reworked by plough action. As features were not visible in this material in plan, it was machined away. However, several features do appear to cut this material when viewed in section, notably ditch [110]. Natural boulder clay assigned the number (103) formed the base of the stratigraphic sequence exposed in this trench.
6.6.4. Context number [105], a sub-circular feature, was located in the middle of TR1. This feature measured 0.90 m east - west, 0.68 m north - south and 0.14 m deep. This context was filled by (104) a firm, mid orangy-brown clay with very occasional chalk flecks. The amorphous, irregular nature of the cut lead to the interpretation that this is a natural feature, possibly a tree throw.
6.6.5. Linear feature [107], located in the middle of TR1 was aligned northeast southwest. The portion of the feature revealed in the trench measured 2.15 m long, 0.74 m wide and 0.19 m deep. The cut had straight sides and a slightly concave base. This feature was filled by (106), a mid orangy-brown clay with occasional inclusions of chalk flecks. The sterile nature of the fill and the irregular shape in plan of this feature suggest it may also natural.
6.6.6. Linear feature [110], located in the middle of TR1 was aligned north - south. The length of feature revealed measured $1.60 \mathrm{~m} \times 1.10 \mathrm{~m} \times 0.30 \mathrm{~m}$ deep. This feature had straight sides and a ' V ' shaped base. The upper fill, (108) was a firm, mid browny-orange, clayey-silt that measured 0.15 m thick. This lay above the primary fill (109), a soft, mid greyish-brown, clayey-silt with a maximum thickness of 0.20 m . Sample $<1>$ was recovered from this context, from which two modern weed seeds and small fragments of CBM were retrieved. A single piece of naturally struck flint was also recovered from this deposit. This feature
truncated ditch [112]. The regularity of the cut, when considered in conjunction with the nature of the fills makes this the most convincingly archaeological feature seen in this trench.
6.6.7. Linear feature [112] was aligned northwest - southeast, just to the east of [110]. Ditch [110] truncated this feature. An area 3.20 m long and 0.70 m wide was revealed. This feature had a maximum depth of 0.18 m . The single fill, (111) was a firm, mid orange, silty-clay. The colour of the fill and the amorphous shape suggest this feature may be naturally occurring.
6.6.8. Linear feature [114] was located in the eastern end of TR1. This north - south aligned cut is irregular in plan, measuring 1.90 m long, 1.95 m wide and 0.24 m deep. It was filled by (113), a soft, mid greyish-orange, silty-clay with very occasional chalk and manganese flecks towards the base. This feature had an uncertain eastern extent and may join the adjacent feature [116]. The amorphous shape and nature of the fill suggest that this feature is naturally occurring
6.6.9. Linear feature [116] was located in the eastern end of TR1. This north - south aligned cut is irregular in plan, measuring 1.9 m long, 1.10 m wide and 0.21 m deep. The single fill, (115), was a firm, mid orangy-brown, clay with occasional chalk flecks. This very clayey material probably represents a natural deposit, possibly forming the eastern extent of [114].??
6.6.10.Ditch [112] has a high confidence rating of representing an archaeological feature. Ditches [107] and [110] have a moderate confidence rating. Pit [105] and linear features [114] and [116] have a low confidence rating, and probably represent natural features.

### 6.7.TRENCH 2 (TR2)

Trench plan figure 7, sections figure 8, 9, 10.
6.7.1. TR2 was located along the northern boundary of the development area orientated on an east - west alignment. The base of the trench at the eastern end was cut to 109.55 m OD, and the eastern end to 109.77 m OD. The maximum depth of the trench was 0.50 m BGL. The features are described from
east to west.
6.7.2. The topsoil (201) had a maximum thickness $0 f 0.24 \mathrm{~m}$. Below the topsoil was (202), a firm, mid orangey-brown, silty-clay subsoil. This deposit was seen throughout TR2 and had a maximum thickness of 0.39 m . Natural boulder clay (203) formed the base of the stratigraphic sequence exposed in this trench. Several pockets of darker, siltier natural material were assigned the number (216).
6.7.3. Sub-circular feature [204] extended under the southern baulk. This concave feature was 0.16 m deep. The fill, (205), was a firm, mid greyish-brown mottled red, silty-clay. This shallow feature could well be a posthole. There is a high level of confidence that this is an archaeological feature.
6.7.4. Sub-square feature [206] was filled by (207), a soft, mid brown, clayey silt that became sandy towards the base of the feature. The unusual fill, coupled with an irregular base means that this feature has a moderate confidence rating.
6.7.5. Feature [208] appeared to be a north-south aligned and was curvelinear in plan. However, excavation of a hand dug slot showed an uncertain eastern edge. This feature was filled by (209), a firm, mid orangy-brown, clayey-silt. There is a low confidence rating that this is an archaeological feature. The uncertain eastern edge and the curve of the cut raises the possibility that this could be a tree throw.
6.7.6. Linear feature [210] follows a north - south alignment and was a steep sided, flat bottomed, measuring 0.70 m deep. It is filled by (211), a soft, mid orangybrown, silty-clay. Although the fill extended to the east of the cut feature as a thin spread, the regular nature of this feature suggests a high confidence rating. As this feature is perpendicular to the road, it may well represent a disused field boundary ditch.
6.7.7. Two perpendicular, intercutting ditches were recorded in the eastern extent of the trench. Feature [212], was aligned east - west and filled by (213), a firm, mid greyish-brown, silty-clay with moderate inclusions of charcoal and chalk flecks. Feature [212] could clearly be seen in section to cut [214]. The latter followed a north - south alignment and was filled by (215), a firm, light
greyish-brown, silty-clay with moderate small chalk inclusions. The presence of charcoal in the fill of [212] gives this ditch a high confidence rating. The alignment of ditch [212] suggests it is a continuation of ditch [524]. However, [214] is very shallow and ephemeral, the fill is also similar to the natural. This therefore receives a low confidence rating.
6.7.8. Post hole [204], ditch [210] and ditch [212] have a high confidence rating, pit [206] a moderate rating. Tree throw [208] and linear feature [214] have a low confidence rating.

### 6.8.TRENCH 3 (TR3)

Trench plan figure 11, sections figure 12, 13, 14.
6.8.1. TR3 was located along the western boundary of the development area, orientated on a north - south alignment. The base of the trench at the northern end was cut to 108.64 m OD, and the eastern end to 108.63 m OD. The maximum depth of the trench was 0.54 m BGL. The features are described from north to south.
6.8.2. The topsoil (301) had a maximum thickness $0 f 0.32 \mathrm{~m}$. Below the topsoil was (302), a firm, mid yellowish-brown, silty-clay with frequent chalk flecks and occasional small to medium pieces of flint. This deposit was seen throughout TR1 and had a maximum thickness of 0.18 m . This material lay above the natural boulder clay (303). Context (302) represents the upper horizon of the natural boulder clay that has been disturbed and reworked by plough action. As features were not visible in this material in plan, it was removed by machine. No features could be seen cutting this material in section. Several different natural contexts were recorded in this trench. Natural boulder clay (303) formed the base of the stratigraphic sequence exposed in this trench. Darker boulder clay encountered in the north of the trench was assigned a separate context number (304). A patch of firm, dark reddish-brown, silty-clay was encountered in the middle of the trench was assigned context number (314).
6.8.3. A small spread of mid brownish-grey, silty-clay (305), was encountered in the north end of the trench. Hand excavation of a slot through this deposit showed it to be a thin spread 0.10 m thick, containing small fragments of CBM.
6.8.4. Context (307) was originally thought to be an east - west aligned linear feature. However, a hand excavated slot proved this stiff, light brown, silty-clay to be a 0.18 m thick natural spread.
6.8.5. Linear feature [310] was encountered in the centre of the trench. A 1.6 m length of this east - west aligned feature was exposed. It measured 1.02 m wide, 0.70 m deep and had a ' V ' shaped base. This feature was filled by (309), a soft, dark reddish-brown, clayey-silt.
6.8.6. Immediately to the south of linear feature [310], a small pit or scrape, extending under the eastern baulk, was sectioned. It was filled by (312), a firm, dark reddish-brown, clayey-silt with frequent small chalk and flint inclusions.
6.8.7. Features [310] and [313] appeared contiguous in plan. However, during excavation it could be seen that they were separated in section by (311), this appeared to be reworked boulder clay. It raises the possibility that features [310] and [313] are both a part of the same natural feature.
6.8.8. A 1.70 m length of curvilinear feature [320] was encountered in the centre of the trench. This feature was 0.55 m wide, 0.36 m deep and had steep, straight sides breaking sharply into a flat base. This feature was filled by (319), a firm, dark reddish-brown, clayey silt with occasional CBM and charcoal flecks. The profile of the feature and the inclusions in the fill show that this is an archaeological feature. This ditch appears to be the same feature as [316].
6.8.9. In the south end of TR3, a slot was excavated through what appeared in plan to be a single ditch aligned northeast - southwest. However, excavation reealed that this was in fact two parallel cuts [316] and [318]. Ditch [316] can clearly be seen cutting [318] in the northern section, however, it is not visible in the southern section, suggesting that the feature may have terminated within the length of the excavated slot. [316] was filled by (315), a firm, dark reddishbrown, silty-clay with occasional inclusions of chalk flecks. The upper fill of [318] was (317), a hard, dark greyish-brown, silty-clay with moderate inclusions of small chalk and flint. A flint scraper and CBM fragments were recovered from this context. This overlay the primary fill, (321), a hard, mid
yellowish-brown, slightly silty-clay with frequent chalk flecks. Context (321) represents slumped natural (303).
6.8.10.Ditch [320] has a high confidence rating and is probably the same feature as [316]. Ditch [318] also has a high confidence rating. There is a moderate confidence rating that features [310] and [313] represent archaeological deposits. Spreads (305) and (307) are clearly natural deposits.

### 6.9.TRENCH 4 (TR4)

Trench plan figure 15, sections figure 16, 17.
6.9.1. TR 5 was located in the centre of the development area orientated on a north west - south east alignment. The base of the trench at the north western end was cut to 108.77 m OD, and the south eastern end to 108.80 m OD. The maximum depth of the trench was 0.89 m BGL. The features are described from north west to south east.
6.9.2. The topsoil (414) had a maximum thickness of 0.17 m . Below the topsoil was (415), a firm, mid orangy-brown, silty-clay subsoil with occasional chalk fleck inclusions. This deposit was seen throughout TR5, becoming thicker towards the southeast, where a maximum thickness 0.45 m was recorded. Subsoil (415) lay above the natural boulder clay (411). The natural was changeable in this trench. A pocket of mid reddish-brown, silty-clay (412) was recorded in the centre of the trench. The southeastern end of the trench was machined down to (407), a firm, light orangey-grey, clayey-silt, containing a pocket of (409) a soft, light gray, silt. Hand dug exploratory slots were excavated through the latter two context to confirm they represented natural deposits.
6.9.3. An exploratory slot was excavated through (401), a firm, mid brown, clayeysilt with frequent clay and chalk inclusions A single piece of CBM was recovered from this context. The diffuse edges and the crescent shape of this deposit suggest it is a tree throw.
6.9.4. Linear feature [403] followed an approximately east - west alignment. It was filed by (402), a soft, dark reddish-brown, clayey-silt with moderate inclusions of charcoal flecks. Slumped in boulder clay (431) was recorded against the
northern edge of the feature. The presence of charcoal and the slumping leads to a high confidence rating for this ditch.
6.9.5. Feature [405] was located in the centre of the trench, was sub-square in plan, had irregular edges and extended under the southwestern baulk. The upper fill, (416) was a thin lens of soft, dark brown, silty-clay with occasional CBM and charcoal flecks. This was above (406), a firm, dark reddish-brown, clayey silt with occasional charcoal, chalk flecks and medium flint inclusions. Despite the feature having diffuse edges, the nature of the fill leads to a high confidence rating and an interpretation that this is a pit of unknown function. This feature truncated [408].
6.9.6. Linear feature [408] crossed the trench on an east - west alignment. This narrow, shallow feature was clearly truncated by pit [405]. It was filled by (404), a firm, mid yellowish brown clay with frequent chalk inclusions. This material was very similar to, and had a diffuse horizon with, the natural boulder clay. This leads to a low confidence rating for this probably natural feature.
6.9.7. Deposit (410) was investigated with a hand dug test slot, this confirmed that the firm, mid reddish-brown, silty-clay was a natural deposit.
6.9.8. Ditch [403] and pit [405] both have a high confidence rating. Linear feature [408] a low rating and (401) is interpreted as a tree throw.

### 6.10.TRENCH 5 (TR5)

Trench plan figure 18, sections Figure 19, 20, 21, 22.
6.10.1.TR5 was located in the centre of the development area orientated on a north west - south east alignment. The base of the trench at the north western end was cut to 109.02 OD, and the south eastern end to 10109.56 m OD. The maximum depth of the trench was 0.68 m BGL. The features are described from north west to south east.
6.10.2.The topsoil (501) had a maximum thickness of 0.25 m . Below the topsoil was (502), a firm, mid brown, silty-clay with frequent chalk flecks and occasional small to medium pieces of flint. This deposit was seen throughout TR5 and had
a maximum thickness of 0.20 m . This material lay above the natural boulder clay (503). Context (502) represents the upper horizon of the natural boulder clay that has been disturbed and reworked by plough action. A single feature, [508], could be seen cutting this material in section. Natural boulder clay (503) formed the base of the stratigraphic sequence exposed in this trench.
6.10.3.Linear feature [524] followed an east - west alignment, had a maximum depth of 0.32 m and was filled by (523), a firm, mottled orange and mid brown, clay with occasional flint and frequent charcoal fleck inclusions. Although this feature had an irregular profile, the well defined edges and the presence of charcoal in the fill suggests it is an archaeological feature, probably a ditch. This feature shares an alignment with [212], suggesting it is a continuation of the same ditch.
6.10.4.Feature [504] was filled by (525), a firm, pale orange-brown, clay. Although isolated, the regular profile and nature of the fill of this small, sub-circular feature suggests it is a post hole.
6.10.5.Test excavation of (505) proved this mid orangy-brown clay to be a thin, natural deposit.
6.10.6.(506) was a firm, orange-brown, clay. A test slot showed this deposit to have a clean edge to the west, but to graduate into 'dirty' natural to the east. The admixing with the natural boulder clay, coupled with the circular appearance of the feature suggests that this is a tree throw.
6.10.7.Linear feature [508] was aligned north - south, measuring 1.06 m wide and 0.57 m deep. This feature is unique in this trench, clearly cutting the disturbed natural (502). This relationship was only recorded in section. The primary fill, (526) was a firm, mid orangy-brown clay. Above this was (507), a firm, dark brown, slightly sandy, silty-clay from which a small metal fragment was recovered. This ditch represents a continuation of ditch [807].
6.10.8.Deposit (509) appeared to be a linear feature in plan. However, hand excavation showed this firm, mid orangy-brown clay to be a thin, natural deposit with no clearly defined edges.
6.10.9.In the centre of the trench were a group of sub-circular features interpreted as post holes: $[511](510),[513](512)$ and $[515](514)$. These three features are all of a similar size (c. $0.4 \mathrm{~m} \times \mathrm{c} .0 .15 \mathrm{~m}$ ) and are all filled by mid-brown clays. The arrangement of these post holes suggests that they form 3 corners of a square, possibly representing a four poster building.

6.10.10.Rectangular feature [517] was filled by (516), a firm, orange-brown clay. This feature had irregular edges, leading to some uncertainty as to whether this represents an archaeological feature or a natural deposit.
6.10.11.Linear feature [519] was aligned east - west. This feature measured 1.10 m wide and 0.88 m deep, representing the largest feature recorded. The feature had straight, vertical sides and a flat base. The fill was (518), a firm, mid orangy-brown clay. Slumped in boulder clay was present on both sides of the feature at the top of the section. The alignment and profile of this ditch suggest it is a continuation of ditch [612].


Plate 2 - Trench 5, looking west, Ditch [519]
6.10.12.Excavation of circular feature [522] clearly showed this to be a post hole. It appears that a circular post hole has then had a stake further inserted. The post pipe (520) is clearly visible, consisting of a dark brown silty clay that describes a post with a diameter of 0.25 m . The packing material (521) is a firm, orange brown clay.
6.10.13.Ditches [508], [519] and [524] have a high confidence rating. Post holes [504][511], [513], [515] and [522] also have a high rating. Feature [517] has a moderate rating. Deposit (506) is a tree throw and deposits (505) and (509) also represent natural material.

### 6.11.TRENCH 6 (TR6)

Trench plan FIGURE 24, 25, sections FIGURE 26, 27, 28.
6.11.1.TR6 was located in the east of the development area orientated on a north south alignment. The base of the trench at the northern end was cut to 109.71 m OD, and the southern end to 109.66 m OD. The maximum depth of the trench was 0.80 m BGL. The features are described from north to south.
6.11.2.The topsoil (601) had a maximum thickness of 0.34 m . Below the topsoil was (602), a firm, mid greyish-brown mottled red, clayey-silt with occasional small flint and chalk inclusions. This deposit was seen throughout TR6, had a maximum thickness of 0.30 m and is interpreted as a subsoil. This material lies
above the natural boulder clay (603).
6.11.3.Feature [629] was recorded in the north end of the trench. This discreet feature was sub-rectangular in plan. This feature measured 0.12 m deep and was filled by (628), a firm, mid grey, silty-clay. It remains unclear whether this feature is archaeological or natural in origin.
6.11.4.Feature [627] was only partially revealed as it extended under the western baulk. It was filled by (626), a firm, dark brown, clayey-silt with moderate inclusions of charcoal flecks. The presence of charcoal in the fill and the well defined edges give this feature a high confidence rating. Although only partially revealed, this feature appears to be a pit of unknown function.
6.11.5.The northern end of the trench also contained a complex of three intercutting Linear ditches. Cuts [605] and [607] run parallel to one another on a northwest - southeast alignment and appeared in plan to be the same feature. [609] passes through the trench on a perpendicular northeast - southwest alignment.
6.11.6.Linear feature [607] was straight sided and flat bottomed, measuring 0.79 m wide and 0.53 m deep. It was filled by (606), a firm, dark brown, clayey-silt with occasional charcoal and chalk fleck inclusions. [605] was also straight sided and flat bottomed, measuring 1.01 m wide and 0.32 m deep. Although the fills of the features were indistinguishable at the top of the feature, a clear ridge of natural boulder clay separated the two. Fill (604) was noted as being lighter in hue and less chalky than (606). the relationship between the two ditches was not clear. The presence of charcoal in the fill and the regular, clear edges of the cuts means both to these features have a high confidence rating.
6.11.7.Ditches [607] and [605] could clearly be seen to be truncated, in both plan and section, by [609] which was straight sided and flat bottomed. This smaller feature measured 0.68 m wide and 0.28 m deep and was filled by (608), a loose, light brown, clayey-silt. As this feature cuts two other features, it is given a high confidence rating.
6.11.8.Deposit (610) was originally though to be a linear feature. However, hand excavation proved this soft, light brown clayey silt to be only 0.10 m thick, with
a diffuse lower horizon. It is therefore assigned a low confidence rating and interpreted as a natural feature.
6.11.9.Linear feature [612] was aligned approximately east - west. This substantial feature had steep, near vertical sides and a flat base. It measured 1.25 m wide, 0.85 m deep and was filled by (611), a firm, mid orange brown clay. Some slumped boulder clay was recorded on the southern edge in the base of the cut. The profile and the clean nature of the cut give this feature a high confidence rating. This feature represents a continuation of ditch [519].
6.11.10.Two small, sub-circular features interpreted as stake holes lie adjacent to one another - [615] and [625]. Both features clearly have a post pipe visible in section from a driven post. Both are filled by a similar material, a firm, greybrown, silty-clay numbered (613) and (623) respectively. The packing material is also similar in both, a firm, orange-brown clay numbered (614) and (624) respectively. The presence of a post pipe leads to these features having a high confidence rating. The similarities in form and fill types between the two features is striking.
6.11.11.To the south of the post holes a narrow linear feature [617] runs northeast southwest through the trench. This feature has a 'U' shaped profile with a flattened base. It is filled by (616), a firm, light orange-brown, clay. The regularity of this feature leads to it having a high confidence rating, probably representing a narrow ditch or gully.
6.11.12.Ditch [619] runs east west though the southern end of the trench. The southern edge of the cut has steep sides which are slightly concave and a concave base, suggesting an originally ' V ' shaped profile. It is filed by (618), a firm, orange-brown clay with occasional small chalk and gravel inclusions. There is substantial slumping of natural boulder clay into the feature at the top on the southern edge. The east side of [619] has been truncated by re-cut [621], a narrower, 'V' shaped ditch. This is in turn filled by (620), a firm, dark orange-brown, clay. The upper fill of re-cut [621] is (622), a firm, very dark brown, silty-clay. These features have a high confidence rating.
6.11.13.Ditches [605], [607], [609], [612], [617] and [619] have a high confidence
rating, as do stake holes [615] and [625]. Pit [627] also has a high confidence rating. Feature [629] has a moderate rating and (610) is a natural spread.

### 6.12.TRENCH 7 (TR7)

Trench plan figure 29, sections figure 30.
6.12.1.TR7 was located in the east of the development area orientated on an east west alignment. The base of the trench at the western end was cut to 109.80 m OD, and the eastern end to 110.16 m OD. The maximum depth of the trench was 0.68 m BGL. The features are described from west to east.
6.12.2.The topsoil (700) had a maximum thickness of 0.29 m . Below the topsoil was a (701), a firm, light orange-brown, silty-clay with occasional small chalk inclusions. This deposit was seen throughout TR7, had a maximum thickness of 0.37 m and is interpreted as a subsoil. This material lies above the natural boulder clay (704).
6.12.3.Several pockets of firm, orange brown clay were encountered. Two of these, (705) and (706) were investigated with hand dug test slots, but found to be variations in the natural deposits.
6.12.4.A single linear feature [702] was recorded in the middle of the trench, following a northwest - southeast alignment. This steep sided, flat bottomed feature was 0.89 m wide and 0.46 m deep. It was filled by (703), a firm, mid orange-brown, silty-clay. The regularity and sharpness of the cut lead to a high confidence rating for this feature as a ditch.

### 6.13.TRENCH 8 (TR8)

Trench plan FIGURE 31, sections FIGURE 32, 33, 34, 35.
6.13.1.TR8 was located in the centre of the development area orientated on an east west alignment. The base of the trench at the western end was cut to 108.95 m OD, and the eastern end to 109.49 m OD. The maximum depth of the trench was 0.63 m BGL. The features are described from west to east.
6.13.2.The topsoil (801) had a maximum thickness of 0.25 m . Below the topsoil was (802), a firm, mid orange-brown, silty-clay with occasional chalk inclusions.

This deposit was seen throughout TR8 and had a maximum thickness of 0.25 m . This material lies above the natural boulder clay (803). Context (802) represents the upper horizon of the natural boulder clay that has been disturbed and reworked by plough action. A single feature, [807], could be seen cutting this material in section. Natural boulder clay (803) formed the base of the stratigraphic sequence exposed in this trench.
6.13.3.Linear feature [804] crossed the trench on a northwest - southeast alignment. It measured 1.20 m wide, 0.35 m deep and was filled by (805), a soft, mid orange-brown, clay with occasional chalk inclusions. This feature has a high confidence rating and is interpreted as a ditch.
6.13.4.Linear feature [807] crosses the trench on an approximately north - south alignment. This small ditch or gully is filled by (806), a firm, mid brown, clay. This feature has a high confidence rating and clearly cut through the disturbed natural boulder clay (802). this feature represents a continuation of ditch [508].
6.13.5.Discreet feature [811] was sub-circular in plan and extended under the southern baulk. It was 0.70 m across and filled by (810), a firm, mid orangebrown clay. This shallow pit has a high confidence rating as it could clearly be seen in section to cut [809].
6.13.6.Linear feature [809] was 0.46 m wide, 0.19 m deep and aligned northeast southwest. This feature was filled by (808), a firm, mid orange-brown, clay and was clearly cut by pit [811]. The regularity of the profile of this feature leads to a high confidence rating that this is the base of a shallow ditch or gully.
6.13.7.Feature [813] was sub-circular in plan. This straight sided, flat bottomed feature was 0.24 m deep. It was filled by (812), a firm, mid orange-brown clay. The clean, regular nature of the cut leads to a high confidence rating that this is either a shallow pit or large post hole.
6.13.8.ditchs [815] and [816] both cross the trench on a north - south alignment. These two cuts were originally thought to be the same feature. However, feature [816] could clearly be seen to cut feature [815] in section.
6.13.9.Linear feature [816] was 1.45 m wide, yet only 0.21 m deep. It was filled by (817), a firm, mid orange-brown, clay. Although not visible in section, a thin lens of Light gray, silty-clay was recorded in the top of this feature in plan. This feature has a high confidence rating and is interpreted as a ditch.
6.13.10.Ditch [818] truncated [815]. The latter was filled by (814), a firm, mid orange-brown, clay. This feature has a moderate confidence rating, it remains unclear whether this represents a natural or an archaeological feature.
6.13.11.Feature [820] extended under the northern baulk. Filled by (819) a firm, mid orange-brown, clay, this feature was only 0.10 m deep. It has a moderate confidence rating and may well represent a natural feature.
6.13.12.Ditches [804], [807], [809] and [818]as well as pits [811] and [813] all have a high confidence rating. Ditches [815] and [820] have a moderate confidence rating and may represent natural features.

### 6.14.TRENCH 9 (TR9)

Trench plan figure 36, sections figure 37.
6.14.1.Located in the south of the development area, on a northeast - southwest alignment, TR9 was shortened to 35 m due to the presence of several portable buildings.
6.14.2.The base of the trench at the southwestern end was machined down to 109.45 m OD, and the northeastern end to 109.37 m OD. The trench was deepest at the northeastern end, where it was 1.18 m BGL.
6.14.3.The topsoil (904) had a maximum depth of 0.30 m . Below this was the subsoil (903), a mid reddish-brown, clayey-silt with a maximum recorded thickness of 0.25 m . Boulder clay (901) formed the base of the stratigraphic sequence, with frequent large pockets of (900), a mid, reddish-brown, clayey-silt with occasional chalk inclusions.


Plate 3 - Trench 9, looking SW, showing palaeo-channel [908]
6.14.4.A possible palaeo-channel [908] is present in the first 17 m of the northeast of the trench. Only the southern edge of this east - west aligned feature is visible. A slot was excavated into the centre of this feature, showing it to be 0.55 m deep. The basal fill, (906) was a firm, dark reddish-brown, clayey-silt. This was covered by (907), a light orange mottled grey, slightly clayey-silt with frequent small to large lenses of boulder clay. Some of these lenses were clearly aligned east - west, suggestive of a flowing stream. The section excavated through the feature clearly showed a ridge of natural boulder clay, in between two possible channels.

## 7. Finds and environmental samples

### 7.1.ENVIRONMENTAL SAMPLES

7.1.1. A single environmental sample was recovered from primary ditch fill (109) and submitted for assessment. Two weed seeds, probably representing modern contamination, and several small fragments of CBM were recovered. No further work is recommended.
7.1.2. The full environmental assessment report (CAMPION 2008) is reproduced in APPENDIX 2.

### 7.2.FLINT

7.2.1. A total of six pieces of flint were recovered from site, comprising of five distinct flint materials. Of the six pieces, three were unstratified hand collected from the surface, in the west of the development area. The remaining three were recovered from secure contexts, (101) - topsoil, (109) - primary ditch fill and (317) - ditch fill. Contexts (109) and (317) both also produced CBM, suggesting that the flints are residual.
7.2.2. Four pieces appear to be deliberately worked tools, one piece of debitage and a naturally struck fragment.
7.2.3. The tools comprise a single blade, a backed blade and two scrapers. The forms of these tools are typical of the late Neolithic and Bronze Age tools identified in the area.
7.2.4. There were five distinct materials present in the assemblage, four of which were utilised for tool production. The lack of waste material and debitage could be an indication that the assemblage is made up of discarded tools rather than the site of tool production.
7.2.5. The flint assemblage is focused on the western portion of the development area. Unfortunately, none of the features were dated by the flint finds they contained, as all contained much more recent material, suggesting the flints were residual.
7.2.6. A full assessment of the flint (POOLE 2008) is provided as APPENDIX 3.

### 7.3.THE CERAMICS

7.3.1. Several small fragments of abraded CBM were recovered from spread (305).
7.3.2. Ditch fill (317) yielded a small and a medium fragment of abraded CBM, probably brick.
7.3.3. A small, broken piece of CBM that appears to be a ?tile fragment of unknown date was recovered from spread (401).
7.3.4. Although CBM has produced the only dating evidence form the site, no further work is suggested for the ceramic assemblage.

### 7.4.METAL FINDS

7.4.1. A single broken, corroded fragment of Iron was recovered from ditch fill (507), probably representing a post medieval fixing or fastening.
7.4.2. The metal assemblage is not significant.

## 8. Discussion and Conclusions

8.1.The evaluation has shown that there was moderate evidence for significant archaeological remains within the proposed development area. Although a moderate density of features were recorded, there is a marked paucity of material remains, leaving the majority of the features undated. Similarly, the heavy cryoturbation of the natural boulder clay has produced an often confusing picture within the evaluation trenches.
8.2.Over the west of the development area, a transitional layer of disturbed natural was recorded and plough scars were visible in the base of many of the trenches. Only two features, ditches [508]/[807] and ditch [110] cut the transitional, plough disturbed natural layer, the rest of the features being sealed by this layer. This clearly shows a moderate to high level of plough damage to in-situ archaeological deposits in the west of the development area. A developed subsoil has afforded the archaeolgical features in the east of the development area a higher degree of protection from the plough.
8.3.The highest density of features was recorded in the centre, and east of centre, of the development area. The majority of features recorded during the evaluation were ditches. Due to the poor drainage qualities of the underlying boulder clay, it is probable that these represent drainage ditches.

### 8.4.PREHISTORIC

8.4.1. Several Late Neolithic / Early Bronze Age flints were recovered as either surface, or residual finds. These were limited to the west of the development area, providing evidence of the earliest activity on site.
8.4.2. In the centre of the development area, three post holes ([511], [513] \& [515]) appear to represent 3 corners of a square structure. Possibly a 'four poster building' of Bronze or Iron Age date. This may be indicative of low level occupation in the vicinity. However, the lack of finds suggests this may not be the case.

### 8.5.POST ROMAN

8.5.1. A series of features are loosely dated by the presence of CBM.
8.5.2. Ditches [508] and [807] represent the same north-south aligned feature. CBM and a small fragment of metal were recovered from [508]. Both excavated sections of this feature were clearly seen to cut the disturbed, natural transition layer. Taking into account this ditches perpendicular alignment to the road, and it's high position in the stratigraphic sequence, it seems likely that it represents a relatively recent field boundary ditch. Although undated, ditch [210] followed the same alignment as the above feature and is possibly a remnant of the same, now unused, system of landscape division.
8.5.3. CBM was also recovered from ditch [110], that again cut the disturbed natural transition layer, suggesting it may also be related to the above mentioned phase of earlier land division.
8.5.4. CBM was also recovered from ditch [318]. This was truncated by ditch [316], suggesting both of these features are of a more recent date.
8.5.5. Two small spreads, (305) and (401) also contained CBM.

### 8.6.UNDATED FEATURES - CENTRE

8.6.1. Ditches [519] and [612] both run east - west, share an alignment and have a similar profile. It is therefore suggested that they represent the same ditch. This is the most substantial feature on site. Lying to the south, and within ten metres of the above mentioned ditch is a substantial stake hole [522] and a pair of post holes: [615] and [625]. It is tempting to associate these features with the post hole group (provisionally dated as Bronze / Iron Age) excavated immediately to the northwest of ditch [519] / [612].
8.6.2. Together with several other features, including multiphase, intercutting ditches in the north of TR6, these features represent the focus of past activity on the site.

### 8.7.UNDATED FEATURES - OTHER

8.7.1. Linears [212] and [524] are aligned east-west across the north of the development area. These aligned features are of the same size and profile, and are filed by similar material, suggesting they are the same feature.
8.7.2. Ditches [804] and [809], in the south of the development area, are also similar in nature and could potentially join to form a corner, possibly of a small compound or enclosure.
8.7.3. Feature [908] seems to be a shallow palaeo-channel. The excavated slot suggests that there may have been more than one stream course, whilst the linear boulder clay lenses in the upper fill suggest a flowing stream course.

### 8.8.CONCLUSION

8.9.The results are of local importance, the preservation of the archaeology is good to moderate, due to plough damage. The artefact concentration is low.
8.10.A high concentration of features was noted in the centre of the development area, with a moderate number of features recorded across the rest of the area.
8.11.Although undated, the form of the features in the centre of the site suggests that the evaluation may have encountered the edge of a prehistoric settlement.
8.12.As the majority of the features remain undated, a firmer interpretation would require further work to ascertain the date of the remains.
8.13.A suitable mitigation strategy for the site is likely to involve a combination of open area excavation and watching brief during the intrusive groundworks.

## FIGURES





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Scale 1:20 @ A4




Scale 1:25 @ A4





$\square$

Scale 1:250 @ A4





407







Section as shown below left 511
 Section as
shown below centre 513


Scale 1:25 @ A4
PROJECT // 0683E - Trisail
DESCRIPTION // Trench 5 Sections


Scale 1:25 @ A4



FIGURE 24 // Trench 6 plan




Section as shown bottom right












# SOURCES CONSULTED APPENDIX I 

## BIBLIOGRAPHIC

CAMPION S, 2008. Palaeo-environmental assessment report: Trisail Towers development, Elsenham. L - P : Archaeology, Unpublished Archive Report.
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# SPECIFICATION <br> APPENDIX 2 

Specification for Archaeological Evaluation of the

## TRISAIL TOWERS DEVELOPMENT' ELSENHAM

For MLM Environmental
Steven Campion BSc
L-P:ARCHÆOLOGY

Specification for Archaeological Evaluation of the

## TRISAIL TOWERS DEVELOPMENT ELSENHAM

| Client: | MLM Environmental |
| :--- | :--- |
| Local Authority: | Uttlesford District Council |
| NGR: | 555080, 225404 |
| Planning App: | N/A |
| Author(s): | S Campion |
| Doc Ref: | JP0683E-SAE-v I.I |
| Date: |  |

## L~P:ARCHÆOLOGY

A trading name of the $L \quad P$ : Partnership Ltd.
The Compound | 79 Cowley Road | Cambridge, CB4 ODN | + 44 [0]I223 423969

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## 1. Introduction and Scope of Study

1.1.This specification for an Archaeological Evaluation has been prepared by Steven Campion of L - P : Archaeology on behalf of MLM Environmental.
1.2.The specification considers land at Elsenham Estate, Uttlesford. The whole site occupies an area of approximately 16 hectares and is centred at National Grid Reference 555080, 225404 (figure 1).
1.3.The local planning authority is Uttlesford District Council who take archaeological advice from Essex County Council. A planning application for the construction of a commercial development is currently being prepared.
1.4.The archaeological desk-based baseline study undertaken for the Environmental Impact Assessment has shown that the site has a fair potential for archaeological remains from most periods. It has therefore been agreed that a programme of archaeological evaluation will be carried out on site prior to submission of the planning application in order to aid the decision making process.
1.5.This document sets out the strategy and methodology for the execution of these works. All aspects of the evaluation will be conducted in accordance with the Institute of Field Archaeologist's Code of Conduct, the Standard and Guidance for Archaeological Field Evaluations, and Standards for Field Archaeology in the East of England (GURNEY 2003).
1.6.Archaeological fieldwork will be carried out by appropriately qualified members of L - P : Archaeology's field staff.

## 2. Site Background

### 2.1.GEOLOGY

2.1.1. The BGS Dataindex (HTTP://WWw.BGS.AC.UK/GEOINDEX/INDEX.HTM) details that the site sits on an area of glacial silts, sands and gravels with a fair depth of boulder clay.

### 2.2.TOPOGRAPHY

2.2.1. The site is a mixture of hard standing and scrubland.
2.2.2. Hall Road forms the northern boundary of the site, the site is bounded to the west by Green Street and the eastern boundary is mostly made up of fields(see figure 2).
2.2.3. The site is in close proximity to Stansted Airport, which lies to the south of the site.

### 2.3.ARCHAEOLOGICAL BACKGROUND

2.3.1. Desk based research was undertaken on the sites archaeological background which forms part of the Environmental Impact Assessment and is summarised below.

## PALAEOLITHIC AND MESOLITHIC

2.3.2. There are no records of Palaeolithic or Mesolithic material recorded in the Essex Historic Environment Record (EHER) within a 1 km radius around the site area.
2.3.3. The nearby River Stort has yielded some Palaeolithic and Mesolithic remains and it seems likely that any activity in the area during these periods would have been situated some distance away perhaps around the terrace gravels of the Stort valley.
2.3.4. As such the archaeological potential for this period is considered to be low.

## NEOLITHIC

2.3.5. The EHER records one unstratified find dating to this period which refers to
the discovery of a Neolithic polished axehead at Elsenham (MEX16210), no further details are given with the record and no other records are noted for the area.
2.3.6. In the wider area some limited evidence for Neolithic settlement is known from the boulder clay in the region and from the Stansted Airport Project.
2.3.7. The Stansted Fieldwalking Project (MEX40334) identified a concentration of prehistoric pottery located in a field just to the south west of the site which is thought to represent a site, however no further work has been carried out yet so it is not known what prehistoric period these finds date to, although the EHER entry does note that this is a multi period site.
2.3.8. In light of this the potential for archaeological remains dating to this period must be considered moderate

## BRONZE AGE

2.3.9. The EHER does not record any remains dating to this period within the 1 km search radius.
2.3.10.However it should be pointed out that ongoing excavations at Stansted have revealed significant Bronze Age remains indicating that the site area is located within a wider landscape clearly exploited during the Bronze Age period. Remains indicate occupation, farming and ritual activity was taking place
2.3.11.The discoveries at Stansted are located c1200-1500m to the south of the study site, whilst this does not indicate definite settlement at the study site, it remains possible that the settled Bronze Age landscape did in fact extend as far as the site and the potential for remains pertaining to this period should be considered moderate.

## IRON AGE

2.3.12.The EHER does not record any remains dating to this period with the 1 km search radius.
2.3.13.However in similarity with the Bronze Age, ongoing excavations at Stansted have revealed significant Iron Age remains indicating that the site area is located
within a wider landscape clearly exploited and settled during the Iron Age period. Remains indicate settlement, agricultural and ritual activity was taking place
2.3.14.The discoveries at Stansted are located c1200-1500m to the south of the study site, whilst this is not directly suggestive of settlement at the study site, it remains possible that the Iron Age landscape did in fact extend as far as the site and the potential for remains pertaining to this period should be considered moderate, with perhaps a higher potential for remains relating to the agricultural exploitation of the land during this period.

## ROMAN

2.3.15.The EHER search returned several entries dating to the Roman period suggesting definite activity within the vicinity of the study area.
2.3.16.MEX28792 records the discovery of a surface scatter of Roman potsherds - the density of the scatters is thought to indicate the remains of a cemetery although without further fieldwork it is difficult to tell. These finds were during the Stansted fieldwalking project and were located in a field some 450 m to the south of the study site.
2.3.17.In the same field in 1990 a Roman grave was discovered by metal detectorists. On investigation this turned out to be a rich burial with associated high status grave goods indicative of wealth, the grave goods included; a copper alloy hexagonal box, an iron lamp, coins, pottery, coins and glass and lead glazed vessels. It is thought that this grave is evidence which may suggest that the whole field was a Roman cemetery and other similar style burials may well exist.
2.3.18.This rich burial reflects a pattern for rich burials in the area and similar finds have been made in the Takeley area.
2.3.19.In addition excavations associated with the airport development at Stansted have revealed a series of Roman deposits suggesting a populated landscape during this period, landscape features such as roads, droveways, drainage systems have been identified as well as evidence for domestic occupation and
burial activity (including wealthy burials similar to the one discussed above).
2.3.20.Due to the proximity to this high status burial it seems likely that the study site was exploited during the Roman period, although it is unlikely that the cemetery will have extended this far. The potential for significant remains dating to this period must therefore be considered high.

## SAXON/MEDIEVAL

2.3.21.The study site was located within the parish of Elsenham in this period. A small settlement exists at Elsenham, although the study site is located some distance to the south east of the main settlement and church.
2.3.22.It is thought that during the Saxon period the area of Elsenham and Takeley was densely wooded which is recorded in Domesday as being 'feeding between them 3500 swine'.
2.3.23.Domesday records Elsenham as consisting of four hides with tow ploughs, eight villeins and five serfs. The first mention of the church is recorded in 1070 when it was given as an endowment to the Abbey of St Stephen at Caen.
2.3.24.Only one find is recorded within the 1 km search dating to this period. A widely dispersed scatter of Saxon pottery was located during the Stansted Fieldwalking Project, this was located in the same field to the south west of the study site. The discovery of this is suggestive of continuity of use of this area of land. Again the proximity of the study site to this area increases its potential to contain significant remains dating to the Saxon period.
2.3.25.The church of St Mary's is located to the north of the study site, parts of the church date to the $12^{\text {th }}$ century although it has been subject to much alteration since (MEX16202). The church itself is situated some distance to the main settlement, which has led to suggestions that a deserted medieval village was located around the church (MEX16209), however there is no sound archaeological evidence to support this suggestion.
2.3.26.The manor at Elsenham was held by the Baron of Folkestone in Kent at the time of Domesday. It is not certain where the original manor house was located but a later house was built, known as New House in proximity to the church.
2.3.27.A site known as Motts Hall is located some 300 m to the south west of the study site, not a lot of detail exists for this site although it is thought to date to the Medieval period and was possibly a location for a high status occupation site. Moated settlements such as this are fairly common within the local area.
2.3.28.It seems likely that the study site was land perhaps associated with the nearby residence at Motts Hall during the Medieval period, or perhaps lands within the Elsenham Estate. There is nothing to suggest that the site was actually occupied by a settlement during this period, although once again it forms part of a complex inhabited landscape in this period and there is a high potential for remains pertaining to the agricultural use of the land the potential is lower for settlement activity.

## POST MEDIEVAL

2.3.29.The records contained within the EHER for the Post Medieval period primarily relate to farms and buildings in the area of the study site reflected the nature of the landscape during this period as one of dispersed settlement and agriculture with a small settlement to the north in Elsenham itself.
2.3.30.Also significant in the landscape during this period are the grounds of Elsenham Hall which are located to the north of the study site adjacent to the road. The house itself dates to the $19^{\text {th }}$ century and is a listed building.
2.3.31.Home Farmhouse is a mid $19^{\text {th }} \mathrm{c}$ grey gault brick house (MEX1011322) which has an associated $17^{\text {th }}$ century timber framed barn located to the north west of the farmhouse (MEX1011323). Both of these buildings are listed.
2.3.32.1 and 2 Loppingdale cottages are located ? They are $18^{\text {th }}$ century timber framed buildings and both are listed as is Loppingdale Farmhouse itself which is a $17^{\text {th }}$ century timber framed building (MEX1011325).
2.3.33.Dairy Farmhouse is also listed and is located to the west of the site (MEX1011338).
2.3.34.The house at Motts Hall is listed and dates to the $16^{\text {th }}$ century and was presumably originally moated (MEX1011340).
2.3.35.Tumbleweed is also a $16^{\text {th }}$ century listed building located in proximity to the study site

### 2.4.PROPOSED GROUNDWORKS

2.4.1. The proposed groundworks consist of the erection of 3 office towers with associated car parks and landscaping (FIGURE 2).

## 3. Objectives of Archaeological Evaluation

3.1.The general aims of the evaluation are as follows:
3.1.1. To determine the presence or absence of archaeological deposits or remains.
3.1.2. To assess the character, date, type, state of preservation, and extent of any archaeological remains on site; to recover associated objects; and to record such evidence as does survive.
3.1.3. To provide dating information that will be useful in dating the archaeological deposits encountered.
3.1.4. To assess the nature and extent of any previous damage to archaeological remains on the site.
3.1.5. To note and record the nature, dimensions, and relationship of natural deposits.

## 4. Methodology

4.1.The area of groundworks will be visually inspected prior to the commencement of work.
4.2.Nine trenches measuring $50 \mathrm{~m} \times 1.8 \mathrm{~m}$ will be excavated to ensure a good coverage of the site with particular attention being paid to the road frontage (FIGURE 2).
4.3. The trench locations will be accurately surveyed prior to excavation and related to the National Grid.
4.4.The trenches will be opened by appropriately sized plant. This will normally be a 360 degree tracked excavator with a 2 m wide toothless bucket.
4.5.With the agreement of the Senior Historic Environment Officer at Essex County Council, any recent make-up deposits and bulk deposits will be removed by machine after identification with hand cleaning.
4.6.All machine excavated material will be thoroughly examined for finds and artefacts.
4.7.All archaeological features encountered will be hand excavated by context. For example these may include:

### 4.7.1. Ditch or linear features

4.7.2. Clusters of cuts and re-cut features
4.7.3. Post holes
4.7.4. Any structural evidence
4.7.5. Areas of organic potential
4.8.Pits and postholes will normally be sampled by half-sectioning.
4.9.Linear features will be sectioned as appropriate, with all investigative slots being at least 1 m in width.
4.10.Excavated material will be examined in order to retrieve artefacts to assist in the analysis of the spatial distribution of artefacts.
4.11.Examination and cleaning of all archaeological deposits will be by hand using
appropriate hand tools. Any archaeological deposits will be examined and recorded both in plan and section. The objective will be to define remains rather than totally remove them.
4.12.Should significant archaeological deposits be encountered that are worthy of preservation in situ, work in that area will cease. L - P : Archaeology will notify the Senior Historic Environment Officer at Essex County Council and the client in order to assess the significance of the deposits and to decide on a strategy for sampling them to provide sufficient data for a useful assessment or subsequent mitigation strategy.
4.13.All finds, artefacts, industrial remains and faunal remains will be collected.
4.14.All finds which constitute Treasure under the 1996 Treasure Act for England and Wales will be reported to the coroner by the finder within 14 days of discovery.
4.15.Any human remains will also be left in situ, covered and protected. If removal is essential it can only take place under appropriate Home Office and environmental health regulations. Such removal will be in compliance with the Disused Burial Grounds Amendment Act 1981 and in accordance with current IFA guidelines (BRICKLEY \& MCKINLEY 2004).
4.16.On completion of the excavation of the trenches, they will be backfilled in reverse order, the trench will be compacted by machine but not re-instated.
4.17.Provision will be made in advance for site visits by a representative from the Essex County Council.

## 5. Recording

5.1.The site code ELSTS08 will be used to label (using appropriate materials not adhesive labels) all sheets, plans and other drawings; all context and recording sheets; all photographs (but not negatives); all other elements of the documentary archive.
5.2.The site archive will be so organised as to be compatible with the current requirements of the Saffron Walden Museum. Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto prepared pro-forma recording sheets. Sample registers, finds recording sheets, access catalogues, and photo record cards will also be used.
5.3.Context sheets will include all relevant stratigraphic relationships and for complex stratigraphy a separate matrix diagram will be employed. This matrix will be fully checked during the course of the evaluation. If there is any doubt over recording techniques, the Museum of London Archaeological Site Manual (SPENCE 1994) will be used as a guide.
5.4.A site location plan will be prepared (OS 1:1250) showing the investigation area and development site in relation to the surrounding locality.
5.5.This will be supplemented by a plan at 1:200 (or $1: 100$ ), which will show the location of the areas investigated showing any archaeological features revealed. The locations of the OS bench marks used and site TBM will also be indicated.
5.6.Burials will be drawn at $1: 10$. Other detailed plans will be drawn at an appropriate scale, usually $1: 10$ or $1: 20$.
5.7.The extent of any visible archaeological deposits will be recorded in plan. Long sections showing layers and any cut features will be drawn at 1:50. Short sections will be drawn at 1:20.
5.8.Sections containing significant deposits, including half sections, will be drawn at an appropriate scale, usually $1: 10$ or $1: 20$. All sections will be related to the Ordnance Datum using spot heights and registers of sections and plans will be kept.
5.9.Upon completion of each significant feature at least one sample section will be drawn, (including a profile of the top of natural deposits extrapolated from cut
features etc. if it has not been fully excavated). The natural stratigraphy will be recorded, even if no archaeological deposits have been identified.
5.10.An adequate photographic record will be made of any significant archaeological remains in both plan and section. This will include black and white prints and colour transparencies (on 35 mm film), illustrating in both detail and general context the principal features and finds discovered. The photographic record will also include working shots to illustrate more generally the nature of the archaeological works.
5.11.A register of all photographs taken will be kept on standardised forms.

## 6. Finds

6.1.All identified finds, artefacts, industrial and faunal remains will be collected and retained. Certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained. No finds will, however, be discarded without the prior approval of the nominated representative of the local authority.
6.2. Where possible, unstratified material recovered from the spoil is to be recorded and included with the finds assemblage.
6.3.For the purposes of the evaluation, contexts dating to pre- $20^{\text {th }}$ century human use of the area shall be recorded and pre- $20^{\text {th }}$ century materials shall be retained and included with the finds assemblage.
6.4.The finds assemblage will be retained for deposition with the entire site archive to the Saffron Walden Museum.
6.5.All finds and other items of archaeological interest removed from the site will be subject to an initial assessment of the material archive. Based on the results of this assessment, and subject to the approval of Essex County Council, specialist work will be undertaken where necessary to analyse and record the material archive.
6.6.Packaging of all organic finds and metalwork will follow the guidelines contained within LEIGH ET AL 1993. Any necessary conservation and treatment of metalwork or organic material will be arranged in conjunction with specialist conservators as approved by Essex County Council with full records kept of any treatments given.
6.7.All finds will be treated in a proper manner. They will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in the United Kingdom Institute for Conservation "Conservation Guideline No. 2" (UKIC 1983). Appropriate guidance set out in the Museums and Galleries Commissions "Standards in the Museum Care of Archaeological Collections (1992)" (MGC 1992) will also be followed and the current IFA guidelines (IFA 2001).

## 7. Environmental Strategy

### 7.1.INTRODUCTION

7.1.1. Recovery and treatment of palaeo-environmental and palaeo-economic samples will be carried out in accordance with English Heritage environmental archaeology guidelines (ENGLISH HERITAGE 2002) as well as L - P : Archaeology's Intelligent Environmental Sampling Policy (ALLEN 2008A) and Protocols for the processing and recovery of environmental remains (ALLEN 2008B). Should significant environmental deposits be encountered during the course of the groundworks, the advice of the English Heritage Regional Science Advisor will be sought.

### 7.2.AIMS

7.2.1. To evaluate and assess the potential of any environmental evidence that may be associated with archaeological remains, in order to provide information regarding the contemporaneous environment, economy or human activity.

### 7.3.SAMPLING STRATEGY

## BULK SAMPLES FOR CHARRED PLANT REMAINS (CPR)

7.3.1. If dated and dateable contexts are encountered, bulk disturbed samples will be removed from a series of these contexts or features, concentrating on deposits that contain evidence of archaeological artefacts/activity. The sampling programme will ensure that a range of feature types are sampled. Sampling will concentrate in particular on pits and single-event deposits
7.3.2. If encountered, cremation burials, and cremation-related deposits will be fully sampled primarily for the recovery of small human bone fragments, but a selection will be isolated for flotation and the recovery of charred plant and charcoal remains, to aid in the interpretation of pyre technology and funerary practices.

## BULK SAMPLES FOR INSECTS ANDWATERLOGGGED PLANT REMAINS

7.3.3. A picture of the local and natural surrounding environment may be provided
by the preservation of insects and waterlogged plant remains in deeper, and waterlogged, features. If encountered, all major, and a selection of other minor, waterlogged deposits will be spot sampled. Where deposit sequences are present which encompass any significant span, then a series of samples will be taken through the deposit.

## ANIMAL BONES

7.3.4. Sampling for recovery of fragmented large animal bone will follow $\mathrm{L}-\mathrm{P}$ : Archaeology standard practice (ALLEN 2008A \& ALLEN 2008B).

## SMALL MAMMAL BONES

7.3.5. If necessary, bulk samples for small mammal bones (pit fall victims) may be taken from a few pits to aid in the interpretation of the local natural and lived in environment.

## SOILS AND GEOARCHAEOLOGY

7.3.6. If complex geological sequences are encountered, a geoarchaeologist may be consulted in order to assist with the description of the deposits on site and undertake specialist sampling if, and as, necessary.

### 7.4.PRINCIPLES

7.4.1. Sampling will predominately consist of bulk samples from dated or dateable contexts/features. A sample size of 30 litres is preferred, but each sample must be context specific and as such in some cases sample size will be smaller than that nominally anticipated.
7.4.2. If required, a series of bulk samples (for charred plant and charcoal remains) will be taken from a range of feature types in each phase/period, but concentrating on features outlined above.
7.4.3. If required, a select series of bulk samples from waterlogged deposits will be taken from key contexts. These will be generally 10 litres, but up to 30 litres (or greater) to recover artefacts.
7.4.4. Sample types:
$\diamond \quad$ Bulk sample 30 litres size for charred plant and charcoal remains
$\diamond \quad$ Bulk sample 10 (to 30 litres) for waterlogged plant remains and insects
$\diamond \quad$ Bulk samples for cremated bone and charred plant and charcoal remains.
$\diamond \quad$ Bulk samples for small mammal bones (30-50 litres)
$\diamond \quad$ Monolith / kubiena samples

## GENERAL

7.4.5. A range of bulk samples for the recovery of charred plant remains, charcoal and industrial activity should be removed from a selection of:
$\diamond \quad$ well-dated contexts
$\diamond \quad$ clearly dumped and disposed debris (e.g. in pits)
$\diamond \quad$ working areas
7.4.6. Sample sizes, as stated above, will follow recommendations by English Heritage guidelines on environmental archaeology (ENGLISH HERITAGE 2002), and the standard applied by L - P : Archaeology (ALLEN 2008A \& ALLEN 2008B), taking into account any comments from the English Heritage Scientific Advisor.
7.4.7. Bulk samples from deeper features should be taken to assess, and sample for, the presence of waterlogged material (see feature-specific comments).
7.4.8. Consideration should be given to monolith sampling of well-dated, relatively long time sequences, if they occur, to provide an environmental and economic context (pollen) for the site and also to aid in the interpretation of any featurespecific deposition or formation process (geoarchaeology).
7.4.9. Evidence recovered from the programme of environmental sampling will be assessed for potential through summary analysis by an environmental specialist.
7.4.10.Any material considered in the assessment, or future reports, will be retained as part of the finds assemblage.

## 8. Report

8.1.A formal report on the results of the archaeological works will be prepared within four weeks of the completion of the fieldwork and will include:
8.1.1. The aims and methods adopted in the course of the evaluation.
8.1.2. A full description of the nature, extent, date, condition and significance of all archaeological deposits uncovered during groundworks, with specialist opinions and parallels from other sites if required.
8.1.3. Illustrative material including maps, plans, sections, drawings and photographs as necessary.
8.1.4. A catalogue of finds, including any finds or environmental specialist reports.
8.1.5. A comprehensive, illustrated assessment of the regional context within which the archaeological evidence rests and should aim to highlight any relevant research issues within a national and regional research framework.
8.1.6. A predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals and a detailed impact assessment.

### 8.1.7. The OASIS record.

8.2.A draft report will be issued in the first instance to MLM Environmental for comment and client approval.
8.3.Following approval an unbound draft copy of the report will be submitted to Essex County Council for comment and approval.
8.4.Two bound copies of the evaluation report will be sent to MLM Environmental, one copy of the approved report of the results will be submitted to Essex County Council and one hard and digital copy to the Essex HER.
8.5.If considered appropriate, a short report of the evidence will be sent to the relevant journals for inclusion in various fieldwork summaries.

## 9. Archive

9.1.The site code ELSTS08 will be used to mark all plans, drawings, context and recording sheets, photographs and other site material recorded during groundworks
9.2.Documentary material including the paper archive, photographic negatives and prints will be stored in boxes to comply with guidelines as outlined by the Saffron Walden Museum.
9.3.Photographic negatives will be stored in archival quality polypropylene sleeves with strip divisions, three ring holes, centres 107 mm apart and dimensions no greater than, 255 mm (from the punched side to the opposite edge) by 300 mm . The sleeve should have a white writing strip.
9.4.The integrity of the site archive will be maintained, and unless otherwise arranged all finds and records will be properly curated by a single body.
9.5.The minimum acceptable standard for the archival report is defined in the "Management of Archaeological Projects" (english heritage 1991) para 5.4. It will include all materials recovered (or the comprehensive record of such materials) and all written, drawn and photographic records relating directly to the investigations undertaken. It will be quantified, ordered, indexed and internally consistent. It will also contain a site matrix, a site summary and brief written observations on the artefactual and environmental data.
9.6.United Kingdom Institute for Conservation guidelines for the preparation of excavation archives for long-term storage (WALKER 1990) will be followed. Arrangements for the curation of the site archive will be agreed with the County Store, and allowance will be made for any long-term storage costs that may be incurred.
9.7.Pursuant to these agreements the archive will be presented to the County Store within 6 months of the completion of the fieldwork (unless alternative arrangements have been agreed in writing with the Senior Historic Environment Officer at Essex County Council). In addition, written confirmation from the client will be provided for the transfer of ownership.
9.8.The project will be registered and regularly updated as part of the OASIS project.

## 10. Access and Safety

10.1.Reasonable access to the site will be arranged for representatives of MLM Environmental and the Senior Historic Environment Officer at Essex County Council who may wish to make site inspections to ensure that the archaeological investigations are progressing satisfactorily.
10.2.Before any site work commences, a full Risk Assessment Document will be produced setting out the site specific health and safety policies that will be enforced in order to reduce to an absolute minimum any risks to health and safety. In addition to this risk assessment, the following considerations will also be made.
10.3.All relevant health and safety regulations will be followed. Barriers, hoardings and warning notices will be installed as appropriate. Safety helmets and visibility jackets will be used by all personnel as necessary.
10.4.No personnel will work in deep unsupported excavations. The installation of temporary support work and other attendance will be provided as required.

## FIGURES




## SOURCES CONSULTED APPENDIX I

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## RISK ASSESSMENT APPENDIX 2

Risk Assessment for Archaeological Works at

## TRISAIL TOWERS DEVELOPMENT ELSENHAM

For MLM Environmental
Steven Campion BSc
L-P:ARCHÆOLOGY

Risk Assessment for Archaeological Works at

## TRISAIL TOWERS DEVELOPMENT ELSENHAM

| Client: | MLM Environmental |
| :--- | :--- |
| Local Authority: | Uttlesford District Council |
| NGR: | 555080, 225404 |
| Planning App: | N/A |
| Author(s): S Campion <br> Doc Ref: LP0683E-RAD-v1.0 <br> Date: June08 |  |

## L~P:ARCHÆOLOGY

A trading name of the $\mathrm{L}-\mathrm{P}$ : Partnership Ltd.
The Compound | 79 Cowley Road | Cambridge, CB4 ODN | + 44 [0]|223 423969
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## 1. Introduction

1.1.Archaeological excavations may be hazardous places to work if risks to health and safety are not properly identified and minimised in the planning stage. This risk assessment is intended to set out potential risks and to show how these risks will be minimised during the fieldwork project.
1.2.At the commencement of new projects all staff will be given, and sign for, a copy of this Risk Assessment.
1.3.As a means of identifying site-specific hazards, the following Risk Assessment has been completed prior to the commencement of the site work element of this project.
1.4.Enforcement of our health and safety policy will be very strict. Any members of staff not obeying or enforcing this assessment and the general policy will be advised in writing that this is an offence that may lead to dismissal. On the second occasion the employee will be dismissed. This includes not wearing Personal Protective Equipment (PPE) and not using the PPE in the correct manner. This also includes not reporting dangers.
1.5.Before any fieldwork commences, all members of staff will take part in a Health and Safety briefing or "Site Specific Induction". This will explain the procedure for reporting problems with the health and safety procedures, will set out each risk detailed in this assessment and explain the procedures for minimising these risks. The briefing will also explain the correct use of tools and Personal Protective Equipment.
1.6.On sites where L - P : Archaeology are not the principal contractor, staff will be required to attend the Health and Safety induction briefing of the main contractor. This will be in addition to the L-P : Archaeology briefing.

## 2. Site Information

2.1.The proposed development site is at the Elsenham Estate, Uttlesford (555080, 225404).
2.2.L - P : Archaeology will be the principal contractor on the site.
2.3.The site director will ensure that the trenches are adequately fenced off and appropriate signs used.
2.4.Public access to the site is the responsibility of the owner. Excavation areas will be fenced off using high visibility plastic fencing and signed appropriately. Access to any unauthorised or inducted persons will not be permitted to excavation areas.

## 3. General Health and Safety Policies

3.1.L - P : Archaeology recognises its obligations under law to protect the health and safety of its employees. We also expect employees to recognise their obligations to assist us in ensuring that our working practices are effective and are obeyed.
3.2.L - P : Archaeology also operates in accordance with the Health and Safety procedures as set out in The Health and Safety Manual of the Standing Conference of Archaeology Unit Managers (SCAUM 2007)
3.3.Responsibility:
3.3.1. The Project Manager will undertake overall responsibility on site for all Health and Safety procedures on his/her site and will prepare, where appropriate, a risk assessment prior to the commencement of the project. The $\mathrm{L}-\mathrm{P}$ : Archaeology health and safety officer will be consulted at all stages of the project.
3.4.Health and Safety Representative.
3.4.1. On every site a health and safety representative will be appointed. All staff MUST know who this is and must report any problems with the health and safety procedure to this person. In this case, the representative will be Matt Jones.

### 3.5.General Safety Rules

3.5.1. Staff must report problems or dangers immediately.
3.5.2. A mobile phone shall be available on site for emergencies.
3.5.3. Smoking is NOT permitted on any L - P : Archaeology site. This is intended to safeguard worker's health and to prevent risk of fire.
3.5.4. Staff are provided with personal protective equipment and are expected to use it at all times.
3.5.5. No risks to health or safety should be considered as an occupational hazard.
3.5.6. No archaeological site is worth permanent injury or pain. All staff should work to keep the workplace as safe as possible.

### 3.6.General Well being

3.6.1. Staff are provided with toilet and washing facilities and are expected to use them to maintain good personal hygiene. This is quite apart from any risk to health mentioned in any other part of the document.
3.6.2. Staff are provided with warm coats and boots for winter working and are expected to use them.
3.7.No food or drink shall be consumed on site.

## 4. Risks and the Responses

4.1.This section treats each risk in turn and sets out the nature of the risk, the possible danger of the risk, the likelihood of encountering the risk, action to minimise the risk. The use of PPE is considered as a last resort and all other means of minimising exposure to risk should given priority.

### 4.2.Risk: DANGER FROM TRAFFIC

4.2.1. Nature of the risk: There is no traffic access to the site, however, staff may be at risk when crossing the main road located to the North of the site.
4.2.2. Dangers: The dangers of traffic are serious injury to staff and possibly death.
4.2.3. Likelihood of encountering the risk: The risk will be limited to staff entering and leaving the site

### 4.2.4. Actions to Minimise Risk:

- Staff must not loiter at the site entrance or in vehicle turning areas. Staff must enter the site by the appointed pedestrian entrances.
- High visibility jackets MUST be worn at all times.
- Staff must be aware whilst crossing the public roads and gaining access to site.


### 4.2.5. Risk Assessment Breakdown

| Description of activity: Danger from Traffic | Hazards identified: Injury from collision |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days |  |
| Additional control measures required: <br> Staff made aware of road locations <br> Access restrictions in place | Serious and imminent danger identified: |
| Competent person appointed: | YES |
| Matt Williams | Emergency action required: <br> Attention of First Aider and RIDDOR report <br> Call Ambulance |

### 4.2.6. Numerical Risk Value

## Hazard: Danger from Traffic

Severity | 3 | $X$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |
|  |  |  |  |  |
|  | 1 |  |  |  |
| Likelihood |  |  |  |  |
| 1 |  |  |  |  |

### 4.3.Risk: EXCAVATION COLLAPSE

4.3.1. Nature of risk: Excavations with vertical sides may collapse if excavated below certain depths. Excavations must therefore be shored to allow work in deep excavations. The risk of collapse is increased if heavy materials or spoil is placed on or near the trench edge.
4.3.2. Dangers: If excavations collapse, even small amounts of material may severely injure workers by trapping them under very heavy deposits of material. There is a danger of injury and a danger of death. Archaeologists have died due to sections collapsing. There is also a danger to those working outside excavations which collapse due to them being dragged into the slumping material.
4.3.3. Likelihood of encountering risk: Archaeological excavation requires the excavation of holes. There is therefore a possibility that excavations may become too deep.
4.3.4. Actions to minimise the risk:

- No excavations will be excavated beyond 1.2 m deep without the use of shoring or stepping.
- All members of staff are required to ensure that this is obeyed and to report immediately to the Health and Safety Representative any excavations that exceed this depth.
- Staff must never enter a trench over 1.2 m deep regardless of the composition of the soils or the perceived stability of the trench sides until adequate shoring has been installed.
- Staff must never go near the edges of a trench over 1.2 m deep regardless of the composition of the soils or the perceived stability of the trench sides.
- Staff must take care entering and leaving any trench, never jump across a trench, never stand on the edge of a trench and use a ladder if necessary.
- Spoil must not be placed on or near the trench edge.
- If in doubt DO NOT ENTER THE TRENCH.


### 4.3.5. Risk Assessment Breakdown

| Description of activity: Excavation Collapse | Hazards identified: Crushing |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days |  |
| Additional control measures required: <br> Staff fully briefed on danger <br> Monitoring of depth and compaction | Serious and imminent danger identified: |
| Competent person appointed: | YES |
| Matt Williams |  |

### 4.3.6. Numerical Risk Value

## Hazard: Excavation Collapse

Severity | 3 | $X$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |
|  |  |  |  |  |
|  | 1 |  |  |  |
| Likelihood |  |  |  |  |
| 1 |  |  |  |  |

### 4.4.Risk: FALLING ITEMS

4.4.1. Nature of risk: Workers in any excavations may be at risk from items falling from the edge of the excavation. This also includes piles of archaeological spoil or other building materials.
4.4.2. Dangers: Heavy items falling even a short distance may injure or kill the occupants of the trench. Falling spoil will have a similar effect to a trench collapse.
4.4.3. Likelihood of encountering risk: Archaeological excavation requires the excavation of holes. There is therefore a risk of items falling onto the archaeologists.
4.4.4. Actions to minimise the risk:

- No items will be placed on trench edges at any time. This includes tools and equipment.
- No spoil is to be placed on or near the trench edge.
- Other contractors will not be permitted to place items near trench edges at any time. Staff should report this to the health and safety representative immediately.
- NEVER enter a trench that has items on or near the section edge.
- All staff must wear the hard hat provided at all times.
4.4.5. Risk Assessment Breakdown

| Description of activity: Falling Items | Hazards identified: Impact injury |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days | Additional control measures required: <br> Site housekeeping and awareness <br> Competent person appointed: <br> Matt Williams |

### 4.4.6. Numerical Risk Value

## Hazard: Falling Items

| 3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Severity | 2 | X |  |  |
|  | 1 |  |  |  |
|  | 1 | 2 | 3 |  |
| Likelihood |  |  |  |  |

### 4.5.Risk: LIVE MAINS SERVICES

4.5.1. Nature of Risk: Live services may be present buried in the ground on any building site. When excavating archaeologists frequently encounter buried services. These services include: Electricity cables, Telephone cables, Gas Pipes, Water Pipes, Mains Drainage. Representatives of Whitbread Group plcs have agreed to supply plans of existing services, where they are known to exist.
4.5.2. Danger: There is a serious danger to archaeologists from encountering any live services due to electrocution, poisoning, drowning and explosion. There is also serious danger to members of the public, other workers and people in surrounding sites. There is danger of serious injury and danger of death.
4.5.3. Likelihood of encountering the risk: There are not any known services on site. There remains a risk that unknown services are present on site.
4.5.4. Actions to minimise risk:

- Details of services will be requested from the client.
- Be particularly vigilant for signs of service trenches.
- If live services are encountered, cease work immediately and report to the Health and Safety representative.
4.5.5. Risk Assessment Breakdown

| Description of activity: Live Mains Services | Hazards identified: Damage to mains services |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days | Serious and imminent danger identified: |
| Additional control measures required: <br> CAT scan prior to excavation | NO |
| Competent person appointed: | Emergency action required: |
| Matt Williams |  |

### 4.5.6. Numerical Risk Value

## Hazard: Live Mains Services

| Severity | 3 | X |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |
|  | 1 |  |  |  |
|  |  | 1 | 2 | 3 |

Likelihood

### 4.6.Risk: SITE OBSTACLES

4.6.1. Nature of risk: Archaeological sites of all types and especially archaeological sites on construction sites contain a multitude of obstacles and articles that may be accidentally left in dangerous positions. This may include: Rubble piles and other building materials, piles of archaeological spoil, large items of building materials such as structural steels and prefabricated concrete items, slippery surfaces, uneven surfaces, grid pegs, cables for tools belonging to the archaeological team or the other contractors. This also includes excavation trenches themselves into which people might fall.
4.6.2. Dangers: There is a serious risk of tripping, falling and injury from misplaced items or from uneven surfaces. Tripping may result in serious injury or death.
4.6.3. Likelihood of encountering the risk: It is considered highly likely that these kind of risks may be present on site. All staff should be extremely vigilant to ensure that any items are not placed in dangerous places.
4.6.4. Actions to minimise the risk:

- Staff must use agreed walkways to access the site.
- Never place any items such as tools or equipment in walkways or on the ground in or near trenches. Always stow all tools safely in trenches or in the storage area provided.
- Never allow other workmen to place items in areas such as walkways or near trenches. Always report this to the health and safety representative.
- Staff must move about the site with due care and attention; particularly during wet weather when site hazards can be obscured and surfaces become slippery.
- Grid Pegs must be fitted with high visibility rubber caps to make them visible and to make the peg safer.
- Trenches and any excavations should be marked clearly with posts and fluorescent tape to prevent people falling into them.
4.6.5. Risk Assessment Breakdown

| Description of activity: Site Obstacles | Hazards identified: Tripping |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days | Serious and imminent danger identified: <br> Additional control measures required: <br> Site housekeeping |
| Competent person appointed: | Emergency action required: |
| Matt Williams |  |

4.6.6. Numerical Risk Value

Hazard: Site Obstacles

| Severity | 3 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |
|  | 1 | X |  |  |
|  |  | 1 | 2 | 3 |

Likelihood

### 4.7.Risk: DUST OR FUMES

4.7.1. Nature of risk: Movement of building materials and archaeological spoil as well as mechanical breaking of concrete can generate dust. Machines and breakers operated by generators in a confined space can also produce fumes.
4.7.2. Dangers: The dangers of exposure to dust over the long AND the short term can be a serious danger to health including serious long term disease such as lung diseases. Exposure to fumes especially from mechanical plant can result in short term poisoning and death.
4.7.3. Likelihood of encountering the risk: It is highly likely that dust and fumes will be encountered on the site.
4.7.4. Actions to minimise risk:

- Never use mechanical plant in unventilated areas.
- No member of staff is permitted to work in an area containing fumes. The masks issued to all members of staff are intended to prevent dust inhalation not to prevent fume inhalation.
- In dusty areas, dust should be damped down with a fine mist water spray.
- The dust masks provided to all members of staff are considered as a last resort to minimise risk and must be worn at all times.
4.7.5. Risk Assessment Breakdown

| Description of activity: Dust or Fumes | Hazards identified: Choking/Health |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days | Serious and imminent danger identified: |
| Additional control measures required: <br> Dust Masks | NO |
| Competent person appointed: | Emergency action required: |
| Matt Williams |  |

### 4.7.6. Numerical Risk Value

## Hazard:Dust/Fumes

Severity | 3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 | X |  |  |
| 1 |  |  |  |  |
|  | 1 | 2 | 3 |  |
| Iikelihood |  |  |  |  |

Likelihood

### 4.8.Risk: TOXIC SUBSTANCES/ CONTAMINATION

4.8.1. Nature of risk: Archaeological sites are often also contaminated sites due to the presence of contamination by substances hazardous to health. These substances are governed under the COSHH regulations with the exception of Lead which is subject to its own regulations.
4.8.2. Dangers: Toxic materials such as contaminants are extremely dangerous to health and may easily result in serious injury or death. Additional dangers are caused if contaminants are taken off site on tools, finds or clothing. This may put the worker's family and friends at risk.
4.8.3. Likelihood of encountering this risk: Through contamination assessment there is a likelihood of encountering the following contaminants;

- Solvents
- Tar
- Hydrocarbons
- Polyaromatic Hydrocarbons
- Sulphates
- Petrol


### 4.8.4. Actions to minimise risk:

- If suspected toxic material is encountered during the excavations the area must be vacated immediately and senior staff informed.
- Appropriate PPE should be worn in contaminated areas, such as paper overall, gloves and masks. These areas will be made known to staff during the site induction.
- If in DOUBT staff MUST report their doubts to the health and safety officer. Staff should be vigilant for strange odours and residues in soil.
- Appropriate action will include the removal of staff from site and the production of a further risk assessment under the COSHH regulations and
will depend upon advice from specialists.
- All members of staff must use the washing facilities provided as a general practice at all times.
4.8.5. Risk Assessment Breakdown

| Description of activity: Contamination | Hazards identified: Health issues |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days |  |
| Additional control measures required: <br> Access to contaminated areas restricted <br> PPE <br> Competent person appointed: <br> Matt Williams | Yerious and imminent danger identified: |

4.8.6. Numerical Risk Value

## Hazard: Contamination

| Severity | 3 | $X$ |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |
|  | 1 |  |  |  |
|  | 1 | 2 | 3 |  |

Likelihood

## 5. How to Report Risks

5.1.There will be a health and safety representative appointed for all L-P : Archaeology excavations. This person will be on site at all times. If the representative needs to leave site for any reason, a deputy must be appointed and this person must be made known to all members of staff.
5.2.If any member of staff feels at any time that there is a risk to health, they must report this immediately to the health and safety representative who will record the comment in writing.
5.3.The immediate action will be to treat the perceived risk as a genuine risk and work will stop immediately until measures have been taken to minimise the risk.
5.4.All members of staff will then be advised of the change in working practice.
5.5.The action will then be reviewed by L - P : Archaeology's health and safety officer. If permanent action is required, the risk assessment will be updated to include the new actions.

## 6. Agreement

6.1.All members of staff are required to read this document and ask for clarification of anything they have not understood. This includes the selected appendices that have been selected for the site in question.
6.2.This section is therefore in the form of a written commitment from the member of staff to abide by this statement:

I $\qquad$ [print name] have read and understood this risk assessment and the appendices. I understand that I have been provided with the Personal Protective Equipment that I am required to use by law. I have fully understood the risks present on site. I understand how to report any problems with the health and safety practice on site. I understand who my health and safety representative is.
I understand that disobeying the risk assessment will lead to my dismissal.
$\qquad$ [signature]
$\qquad$ [date]

## SITE SPECIFIC RISK ASSESSMENTS APPENDIX 1

## Danger From Traffic

| Description of activity: Danger from Traffic | Hazards identified: Injury from collision |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days |  |
| Additional control measures required: | Serious and imminent danger identified: |
| Staff made aware of road locations | YES |
| Access restrictions in place | Emergency action required: |
| Competent person appointed: | Attention of First Aider and RIDDOR report |
| Milliams |  |

Hazard: Danger from Traffic

Severity | 3 | $X$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |
|  |  |  |  |  |
| 1 |  |  |  |  |
|  | 1 | 2 | 3 |  |
| Likelihood |  |  |  |  |

## Excavation Collapse

| Description of activity: Excavation Collapse | Hazards identified: Crushing |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 days |  |
| Additional control measures required: <br> Staff fully briefed on danger <br> Monitoring of depth and compaction | Serious and imminent danger identified: |
| Competent person appointed: | YES |
| Matt Williams | Emergency action required: |

Hazard: Excavation Collapse

Severity | 3 | $X$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |
|  |  |  |  |  |
|  | 1 |  |  |  |
| Likelihood |  |  |  |  |
| 1 |  |  |  |  |

## Falling Items

| Description of activity: Falling Items | Hazards identified: Impact injury |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days |  |
| Additional control measures required: <br> Site housekeeping and awareness <br> Competent person appointed: <br> Matt Williams | Serious and imminent danger identified: |

## Hazard: Falling Items

Severity | 3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 | $X$ |  |  |
| 1 |  |  |  |  |
|  | 1 | 2 | 3 |  |
| Likelihood |  |  |  |  |

## Live Mains Services

| Description of activity: Live Mains Services | Hazards identified: Damage to mains services |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days |  |
| Additional control measures required: <br> CAT scan prior to excavation | Serious and imminent danger identified: <br> Competent person appointed: <br> Matt Williams |

Hazard: Live Mains Services

Severity | 3 | $X$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |  |
| 1 |  |  |  |  |  |
|  | Likelihood |  |  |  |  |
| 3 |  |  |  |  |  |
|  |  |  |  |  |  |

## Site Obstacles

| Description of activity: Site Obstacles | Hazards identified: Tripping |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days |  |
| Additional control measures required: <br> Site housekeeping | Serious and imminent danger identified: <br> Competent person appointed: <br> Matt Williams |

Hazard: Site Obstacles

Severity | 3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |
|  | 1 | X |  |  |
|  | 1 | 2 | 3 |  |
| Likelihood |  |  |  |  |

## Dust/Fumes

| Description of activity: Dust or Fumes | Hazards identified: Choking/Health |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days |  |
| Additional control measures required: <br> Dust Masks | Serious and imminent danger identified: <br> Competent person appointed: <br> Matt Williams |

## Hazard:Dust/Fumes

Severity | 3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2 | $X$ |  |  |
| 1 |  |  |  |  |
|  | 1 | 2 | 3 |  |
| Likelihood |  |  |  |  |

## Contamination

| Description of activity: Contamination | Hazards identified: Health issues |
| :--- | :--- |
| No of people involved: 1 |  |
| Duration of activity: 7 Days | Serious and imminent danger identified: |
| Additional control measures required: <br> Access to contaminated areas restricted <br> PPE <br> Competent person appointed: <br> Matt Williams | YES |

Hazard: Contamination

Severity | 3 | $X$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2 |  |  |  |  |
| 1 |  |  |  |  |  |
|  | Likelihood |  |  |  |  |
| 3 |  |  |  |  |  |
|  |  |  |  |  |  |

## PALAEO-ENVIRONMENTAL ASSESSMENT APPENDIX 3

Palaeoenvironmental Assessment Report

## TRISAIL TOWERS DEVELOPMENT ELSENHAM

For MLM Environmental
Steven Campion BSc (Hons)
L-P:ARCHÆOLOGY

Palaeoenvironmental Assessment Report

## TRISAIL TOWERS

DEVELOPMENT ELSENHAM

| Client: | MLM Environmental |
| :--- | :--- |
| Local Authority: | Uttlesford District Council |
| Editor(s): | Steven Campion |
| Doc Ref: | LP0683E-EAR-vI.। |
| Date: | August 08 |

# L $\sim$ : A R CHÆOLOGY 

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5. Condition of Material
6. Statement of potential
7. New Research Questions and Potential for Data
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## 1. Introduction

1.1.This document aims to assess the potential of an environmental bulk sample recovered during an evaluation at the land at Elsenham Estate, Uttlesford. In terms of the potential of the material to provide further information regarding the function, date, use and environmental conditions of the site.
1.2.The material was processed, the heavy and light fraction assessed and the report written by Steven Campion.

## 2. Provenance

2.1.One bulk sample was taken during the evaluation of the the land at Elsenham Estate, Uttlesford between the $23^{\text {rd }}$ of June and the $3^{\text {rd }}$ of July by L -P : Archaeology.
2.2.The 30 litre bulk sample $<1>$ was recovered from context (109), trench 1 . Context (109) is the soft, mid greyish-brown, clayey-silt primary fill of [110], a linear feature running north to south, located in the middle of the trench. The feature had straight sides and a ' V ' shaped base and a single piece of struck flint was recovered from this deposit (109) (BAMFORTH 2008).

## 3. Methodology

3.1.The environmental bulk sample was processed by flotation sieving, as outlined in L - P : Archaeology Guideline 2, page 4 (ALLEN 2008). Flot was retained on a 500 micron mesh sieve and the heavy fraction on a 1 mm mesh.
3.2.The heavy fraction was further fractionated using 4 mm and 1 mm sieves to aid analysis. As only one sample was taken, the $>4 \mathrm{~mm}$ fraction and $1-4 \mathrm{~mm}$ fraction was assessed fully with relevant ecofacts and artefcats being extracted from the separate fractions and their abundance recorded. The $<1 \mathrm{~mm}$ fraction was retained for any potential further study, if deemed necessary.
3.3.The flot was sieved through the same stack of sieves, to aid analysis, and scanned under a low powered stereo-microscope with a magnification range of 10 x to 30 x . The abundance, diversity and state of preservation of ecofacts and artefacts in the sample were then recorded.
3.4.Preliminary identifications were made of the plant remains. These do not form a full species list. For the purposes of assessment most identifications are made to genus. The seeds were identified using modern reference material and manuals (BEIERINCK 1947; CAPPERS, ET AL. 2006). Nomenclature and habitat information is taken from STACE (1997) and scientific names will be given once in brackets and the common name given thereafter.

## 4. Range and Variation

### 4.1.SAMPLE < 1>

4.1.1. The $>4 \mathrm{~mm}$ fraction is dominated by large pieces of flint and coarse stone, none of which are worked. No ecofacts or artefacts are present in the fraction.
4.1.2. The $1-4 \mathrm{~mm}$ fraction is dominated by coarse stone. No ecofacts are present in this sample but 7 small pieces of CBM (Ceramic Building Materials) are present in the sample.
4.1.3. The flot is dominated by uncharred root/rhizome fragments. There are also two seeds present. A stinging nettle seed (Urtica dioica L.) and a knotgrass seed (Polygonaceae - cf. Polygonum aviculare L.).

## 5. Condition of Material

5.1.There were no ecofacts in the heavy fraction.
5.2.The only artefacts recovered were the CBM, all of which is heavily abraded and is of a very small size ( $<4 \mathrm{~mm}$ ).
5.3.In the flot the uncharred root/rhizome fragments and the stinging nettle seed (Urtica dioica L.) are in a good condition while the knotgrass seed ( Polygonaceae cf. Polygonum aviculare L.) is poorly preserved.

## 6. Statement of potential

6.1.The fragments of CBM could potentially be sent to a specialist for analysis.

## 7. New Research Questions and Potential for Data

7.1.There are currently no research questions being undertaken by $\mathrm{L}-\mathrm{P}$ that this sample could aid.

## 8. Recommendations

8.1.The heavy fraction contained no ecofacts at all.
8.2.The depth of the feature ( 0.5 metres), means that the likelihood that the CBM is archaeological in origin is high. The CBM appears to be fired clay but is too heavily abraded and is of too small a size for any further study to be of any worth.
8.3. The maximum depth of the feature was 0.5 metres and root/rhizome fragments dominated the sample. Therefore the possibility of the seeds entering the context via bioturbation is high. This means the two seeds are likely to be modern which is backed up by the fact that both of these are from plants that were present on site which favour disturbed land and wastegrounds (STACE 1997)
8.4.There is nothing from this sample that requires any further analysis or study, so it is recommended that no further work is carried out.

## SOURCES CONSULTED APPENDIX I

## BIBLIOGRAPHIC

ALLEN M 2008. Protocols for the processing and recovery of environmental remains. Unpublished L-P : ARCHAEOLOGY GUIDELINE NO. 2.

BAMFORTH M 2008. Archaeological Evaluation of Trisail Towers development Elsenham Unpublished L - P : ARCHAEOLOGY ARCHIVE REPORT.

BEIJERINCK W 1947. Zadenatlas der Nederlandsche Flora. Wageningen :Veenman and Zonen,
CAPPERS R J T, BEKKER R M \& JANS J E A 2006. Digital Zadenatlas Van Nederlands - Digital Seeds Atlas of the Netherlands. Groningen: Groningen Archaeological Studies Volume 4, Barkhius Publishing,
STACE C 1997. New Flora of the British Isles- Second Edition, Cambridge: Cambridge University Press.

## CATALOGUE

## APPENDIX 2

| Scientific name | Common Name | Item | Frequency |
| :---: | :---: | :---: | :---: |
| Urtica dioica L. | Stinging nettle | seed | । |
| Polygonum aviculare L. | Knotgrass | seed | । |

Table 1 - Plant macrofossils in Sample 1

# FLINT ASSESSMENT APPENDIX 4 

Flint Assessment Report for

## TRISAIL TOWERS ELSENHAM

For MLM Environmental
B Poole BA MSc MIFA

Flint Assessment Report for

## TRISAIL TOWERS ELSENHAM

| Client: | MLM Environmental |
| :--- | :--- |
| Local Authority: | Uttlesford District Council |
| NGR: | 555079,22542 I |
| Site Code | ELSTS 08 |
| Author(s): | LP0683E-FAR-vI.2 |
| Doc Ref: | July 08 |

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3. Struck Flint
4. Summary \& Conclusions

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Figure I - Struck Flint

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Appendix I - Sources Consulted

## 1. Introduction

1.1.This document relates to land at Elsenham Estate, Uttlesford, located at NGR 555080, 225404.
1.2.Uttlesford District Council (UDC), under advice from their archaeological advisor from Essex County Council, requested an archaeological evaluation on the site.
1.3.Site work was carried out by L - P : Archaeology in July 2008.
1.4.This document is an assessment of the flint assemblage recovered during evaluation.
1.5.A total of 6 flints were recovered from the site. A total of 5 distinct flint materials were identified within the assemblage. Of the 6 flints, 3 were unstratified and the remaining 3 were recovered from secure contexts, (101), (109) and (317) respectively.
1.6.A total of 4 flints appear to be deliberately worked tools, with 1 piece of debitage and a naturally struck fragment.

## 2. Raw Materials

2.1.A total of 5 different materials were identified during analysis. All 5 materials were of flint, or mineralised quartz.
2.2.The table below shows the breakdown of materials identified in the assemblage.

| MATERIAL | COLOUR | TEXTURE | CORTEX | TEXTURE |
| :---: | :--- | :--- | :--- | :--- |
| A | Light brown to cream | Smooth | White | Chalky |
| B | Mid brown with black shading | Soapy | Cream | Rough |
| C | White | Soapy | Not present | Not present |
| D | White with grey shading | Smooth | White | Chalky |
| E | Black with white veins | Soapy | Cream | Rough |

Table 1 - Summary of Materials Present in Assemblage
2.3.The table below shows the use of the different materials within the assemblage.

|  | A | B | C | D | E |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Backed Blade | X |  |  |  |  |
| Blade |  | $X$ |  |  |  |
| Natural |  | $X$ | $X$ |  |  |
| Scraper |  |  | X | X |  |
| Table 2 - Summary of Material Use |  |  |  |  |  |

2.4.The form that the assemblage takes indicates that the assemblage represents a series of discarded tools. There is limited evidence for tool production on the site, coming from a single debitage flake.

## 3. Struck Flint

3.1.A total of 5 worked flint tools were recovered from the site along with a naturally struck flint (FIGURE 1). The following section will discuss these flints individually.
3.2.All dimensions given are measured as length, width, depth. Length being the dimension from the proximal point to the distal point. Width is measured at the widest point between the left and right edges. Thickness is the dimension between the dorsal and ventral faces.
3.3.Flint 1 could be seen to be a backed blade potentially dating to the late Neolithic period. This item was recovered from context (101) and was a detached flake 59.9 mm by 23.0 mm by 6.1 mm in size and was formed of material A, a smooth, light brown, flint.
3.4.Parallel arises present on the dorsal face represent negative scarring from previous flaking activity. There is a small amount of cortex present on the right side of the dorsal face and retouch can be seen along the right edge of the flint. A hinge fracture terminates the flint at the distal end.
3.5. Flint 2 was a retouched blade dating to the late Neolithic to Bronze Age. The item was made from material B, a mid brown flint with areas of black colouring and a chalky white cortex. Measuring 41.3 mm by 17.4 mm by 5.9 mm the tool had parallel arises on the dorsal face with clear retouch along the right edge and patches of cortex present at the distal point. A bulbar scar could be seen on the ventral face with pronounced hackles.
3.6.Flint 3 could be seen to be a naturally damaged fragment of flint of material C , a white soapy flint. There was clear damage around the flint which appears to be the result of plough damage.
3.7.Flints 4 a and 4 b were made from material D , a white flint with areas of grey shading and a white chalky cortex. Flint 4 a measured 59.1 mm by 36.2 mm by 8.5 mm and appears to be debitage from either tool production or core rejuvenation on the site. The bulk of the dorsal face indicating an early removal from the core.
3.8.Flint 4 b measured 58 mm by 33.6 mm by 7.9 mm and could be seen to be a scraper with retouch present along the right edge. The striking platform was intact with a
small patch of cortex present at the distal end of the flint. Scrapers of this size date to the Neolithic through to the Bronze Age.
3.9.Flint 5 was also a scraper, however, this was of material E, a black flint with rough cream cortex. The tool measured 58.2 mm by 32.9 mm by 12.9 mm and had a smooth ventral face with clear bulb of percussion and cortex present on the dorsal face. No retouch could be seen on the item.
3.10.The table below summarises the assemblage finds.

| ID | CONTEXT | FORM | RETOUCH | CORTEX | MATERIAL | DIMENSIONS | DATE |
| :---: | :---: | :--- | :---: | :---: | :---: | :---: | :---: |
| 1 | $(101)$ | Backed Blade | Y | Present | A | $59.9 \times 23.0 \times 6.1$ | Neolithic |
| 2 | $\mathrm{U} / \mathrm{S}$ | Blade | Y | Present | B | $41.3 \times 17.4 \times 5.9$ | Neolithic |
| 3 | $(109)$ | Naturally Struck | N | No | C | $34.3 \times 27.1 \times 9.9$ | Natural |
| 4 a | Spoil | Debitage | N | Present | D | $59.1 \times 36.2 \times 8.5$ | - |
| 4 b | Spoil | Scraper | Y | Present | D | $58.0 \times 33.6 \times 7.9$ | Neolithic |
| 5 | $(317)$ | Scraper | N | Present | E | $58.2 \times 32.9 \times 12.9$ | Neolithic |

Table 3 - Flint Assemblage Summary

## 4. Summary \& Conclusions

4.1.A total of 6 flints were recovered from the site. Five of these could be seen to represent deliberate working with four tools and a piece of debitage and a naturally struck flint.
4.2.The tools comprised a single blade, a backed blade and two scrapers. The forms of these tools are typical of the late Neolithic and Bronze Age tools identified in the area.
4.3.There were 5 distinct materials present in the assemblage, 4 of which were utilised for tool production. The lack of waste material and debitage could be an indication that the assemblage is made up of discarded tools rather than the site of tool production. However, this may also be representative of the methodology employed during the evaluation. Trenching in this way can miss the smaller fragments of flint typical of tool production.
4.4.The results of this assessment indicate that no further work is required on this assemblage.

## FIGURES



Flint I


Flint 4a


Flint 2

atlllles

Flint 4b


Flint 3


Flint 5
Scale I:I @ A4

## SOURCES CONSULTED APPENDIX I

## BIBLIOGRAPHIC

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## OASIS FORM <br> APPENDIX 5

# OASIS DATA COLLECTION FORM: England 

List of Projects | Search Projects | New project | Change your details | HER coverage | Change country | Log out

## Printable version

OASIS ID: Iparchae1-46118

| Project details <br> Project name | Trisail Towers development |
| :--- | :--- |
| Short description of <br> the project | L-P Archaeology carried out an archaeological evaluation, consisting of nine <br> trenches. Several Late Neolithic / Bronze Age flints were recovered from the <br> west of the development area. These were recovered via surface collection and <br> excavation. The excavated flints proved to be residual finds. Several ditches <br> that related to a previous sub-division of the landscape were recorded. Although <br> undated, it is suspected that these are post medieval. Several post holes, pits <br> and ditches were recorded in the centre of the development area. Although <br> undated, the form of these features suggests they may relate to prehistoric |
| occupation. Several undated ditches were recorded across the rest of the |  |
| development area. |  |


| Position in the <br> planning process | Pre-application |
| :--- | :--- |
|  |  |
| Project location |  |
| Country | England |
| Site location | ESSEX UTTLESFORD ELSENHAM Trisail Towers Development |
| Postcode | CB25 0HB |
| Study area | 16.00 Hectares |
| Site coordinates | TL 550802540451.90509161710 .254570471936515418 N 0001516 E Point |
| Height OD / Depth | Min: 108.30 m Max: 110.16 m |

Project creators

| Name of Organisation | L-P : Archaeology |
| :---: | :---: |
| Project brief originator | Consultant |
| Project design originator | L-P : Archaeology |
| Project director/manager | Stuart Eve |
| Project supervisor | Michael Bamforth |
| Type of sponsor/funding body | Developer |
| Name of sponsor/funding body | MLM Environmental |
| Project archives |  |
| Physical Archive recipient | Essex County Museum Service |
| Physical Archive ID | ELSTS 08 |
| Physical Contents | 'Ceramics','Environmental','Metal','Worked stone/lithics' |
| Digital Archive Exists? | No |
| Paper Archive recipient | Essex County Museum Service |
| Paper Archive ID | ELSTS 08 |
| Paper Contents | 'Environmental','Stratigraphic','Worked stone/lithics' |
| Paper Media available | 'Context sheet',''Drawing','Photograph','Plan','Report','Section' |
| Project bibliography 1 |  |
| Publication type | A forthcoming report |
| Title | Archaeological Evaluation at Trisail Towers, Elsenham |

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