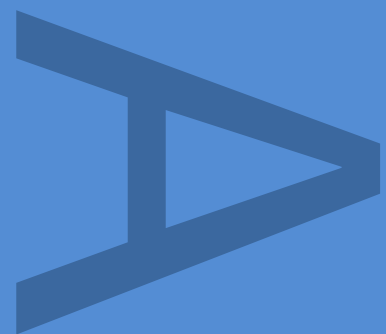


Land North of Former Betts
Factory, Colchester, Essex:
An Archaeological Trial Trench
Evaluation

JULY 2015



PRE-CONSTRUCT ARCHAEOLOGY
R12149

LAND NORTH OF FORMER BETTS FACTORY, COLCHESTER, ESSEX

AN ARCHAEOLOGICAL EVALUATION

Quality Control

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Land North of Former Betts Factory, Colchester, Essex:

An Archaeological Trial Trench Evaluation

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ABSTRACT

This report describes the results of an archaeological trial trench evaluation carried out by Pre-Construct Archaeology on land north of former Betts Factory, Colchester, Essex (NGR TM 01960 28422) between the 29th of June and the 8th of July 2015. The archaeological work was commissioned by Jim Hunter of WSP Parsons Brinkerhoff on behalf of Lands Improvement Holdings Colchester in response to an archaeological brief issued by Adrian Gascoyne, the Historic Environment Advisor of Essex County Council's Place Services Team (ECCPST). The aim of the work was to characterise the archaeological potential of the proposed development area.

The principal result of the evaluation was the discovery of three small fire pits, of a possible late Iron Age to early Roman date, as well as a series of undated ditches of presumed agricultural function. The evaluation also uncovered a single Middle Bronze Age cast, copper alloy palstave axehead, which was located within the interface of the Topsoil and the Natural and was not associated with any cut feature.

1 INTRODUCTION

- 1.1 An archaeological trial trench evaluation and metal-detector survey was undertaken by Pre-Construct Archaeology Ltd (PCA) on land north of the former Betts Factory, Colchester, Essex (centred on Ordnance Survey National Grid Reference (NGR) TM 01960 28422) from the 29th Of June to the 8th July 2015 (Figure 1).
- 1.2 The archaeological work was commissioned by Jim Hunter of WSP Parsons Brinkerhoff on behalf of Lands Improvement Holdings Colchester in response to an archaeological brief written by Adrian Gascoyne, the Historic Environment Advisor of Essex County Council's Place Services Team (ECCPST) (Gascoyne 2015).
- 1.3 The evaluation was carried out in accordance with a Written Scheme of Investigation (WSI) prepared by Taleyna Fletcher and Lawrence Morgan-Shelbourne of PCA (Fletcher and Morgan-Shelbourne 2015).
- 1.4 The aim of the evaluation was to determine the location, date, extent, character, condition and quality of any archaeological remains on the site, to assess the significance of any such remains in a local, regional, or national context, as appropriate, and to assess the potential impact of the development proposals on the site's archaeology.
- 1.5 A total of 26 trial trenches were excavated and recorded which provided a 4% sample of the subject site.
- 1.6 This report describes the results of the evaluation and aims to inform the design of an appropriate archaeological mitigation strategy. The site archive will be deposited at Colchester Museum.

2 GEOLOGY AND TOPOGRAPHY

2.1 Geology

2.1.1 The underlying bedrock comprises the Thames Group; clay, silty, Sedimentary Bedrock formed approximately 34 to 56 million years ago in the Palaeogene Period, which were formed in an environment dominated by deep seas. The area has superficial deposits comprising cover sand with clay and silt elements to the south and east, while to the north, the superficial deposits comprise Kesgrave Catchment Subgroup sands and gravels. These Superficial Deposits formed up to 3 million years ago in the Quaternary Period through windblown and riverine means, respectively. These deposits were present in the evaluation as (102), a mottled light-yellow to mid orange sand and gravel deposit.

2.2 Topography

2.2.1 The site area is formed by small agricultural fields, running parallel to Plains Farm Close to the north-west. The site area slopes gently down from 43.62m Over Datum (OD) in the north-west to 42.68m in the south-east, a fall of 0.94m. The site is located 700m south-west of the Ardleigh Reservoir and 9km south-west of the mouth of the River Stour.

3 ARCHAEOLOGICAL BACKGROUND

3.1 General

3.1.1 The Essex Historic Environment Record (EHER) is a computerised database of all listed and other historic buildings and all known archaeological sites, historic parks and gardens and other historic landscape features in the county, plotted onto linked digital mapping, and backed up in many instances by photographs, drawings and substantial written accounts.

3.1.2 A search of the available HER via the Heritage Gateway website (www.heritagegateway.org.uk) indicates there are a number of records within a 1km radius, relevant examples will be summarised below.

3.2 Iron Age

3.2.1 Wick Farm (SMR 45457), 650m to the north-east of the site contained two archaeological sites dating to the Late Iron Age/early Roman period (mid-1st century BC to mid-1st century AD), which were excavated during preliminary works for the construction of a large reservoir.

3.2.2 The Late Iron Age sites at Wick Farm identified by an earlier trial-trenching evaluation were subsequently excavated in the Silt Pond and Processing Plant areas of the proposed quarry. The Late Iron Age remains in site D (north) were located immediately to the north of a cropmark identified by the trial-trenching evaluation as a Late Iron Age settlement enclosure (site D(south)). A second area of Late Iron Age remains in site C was located in the valley to the east of the settlement enclosure.

3.2.3 Most of the Late Iron Age features and finds were concentrated in site D (north), between two boundary ditches aligned on the entrance to the Late Iron Age settlement enclosure to the south. A small rectangular ditched enclosure formed the focal point for Late Iron Age activity in site D (north), with at least twenty pits ranged around it. Although no features were recorded in the interior of the enclosure, there is evidence for ironworking taking place there, as the enclosure ditch contained a deposit of ironworking waste from a furnace or smithing hearth, including hammerscale and fragments of furnace lining with iron-rich, vitrified surfaces and evidence of a

blowing hole for a set of bellows. This suggests the enclosure was a craft-working area outside the main settlement. The area to the south-east of the enclosure remained free of features and was presumably the line of a trackway leading to the entrance of the main settlement enclosure.

3.2.4 The Late Iron Age remains in site D (north) and the enclosure to the south represent an extensive Late Iron Age settlement spanning the head of the valley. Site C in the valley to the east contained a narrow Late Iron Age trackway heading towards the settlement, and a few Late Iron Age pits, one of which may have been a well. The trackway is thought to have demarcated a boundary between the wet area along the valley floor and a field system to the south.

3.2.5 100m south-west of the Wick Farm site, at land north of Gatehouse Farm (SMR 2545), a further Late Iron Age enclosure was uncovered during a trial trench evaluation. Other smaller features of a similar date, indicative of low levels of activity were also present within the trenches.

3.2.6 Fen Farm (SMR 34524), 700m to the south-east the site contained a Belgic pot with a possible cremation, although this was excavated in 1967 and further information is not available.

3.3 Medieval

3.3.1 Numerous listed buildings dating to the medieval period are present within the search area, these include The Gatehouse Farmhouse (SMR 34520), located 450m north-east of the site, which consists of a 15th Century timber framed house. Other examples are Harvey's Farmhouse (SMR 34521), located 700m east of the site area, which consists of a 15th Century or earlier timber framed house and The Fen Farmhouse (SMR 34524), located next to Harvey Farmhouse, which dates to the 15th-17th Centuries.

3.3.2 The Wick Farm site (SMR 45457) also contained medieval and later remains, which included boundary ditches, gullies and pits in both sites C and D (north), probably related to medieval and post-medieval forerunners of Wick Farm, and a moated enclosure to the south of the modern farm is thought to have been the site of the original farmstead. A boundary ditch in

site D (north) was long-lived, originally dating from the late 12th to early 13th centuries, suggesting a medieval origin to the existing pattern of land division. In site C, medieval and post-medieval ditches and pits lay along the edge of the marginal land in the valley floor, and the post-medieval gullies which lay in the valley floor itself are interpreted as pens for livestock, possibly for watering animals at the nearby spring.

3.4 Post-Medieval

- 3.4.1 Bacons Brickworks (SMR 15563) was located on the east side of Ipswich Road, 500m to the north-east of the site, and was in use from the 1750's to the 1860's. After its use the site was known from the OS maps as 'The Old Clay Pit'. A further brickworks (SMR 15564), opposite Planes Farm, 50m west of the site was active from 1845-1900, and is similarly recorded in 20th Century OS maps as being a disused clay pit. Both of these sites are a probable location of buried industrial archaeological features such as structures/kilns.
- 3.4.2 A pottery kiln dating to the 17th/18th century has been identified at Brookside Cottage (SMR 2456). Vast quantities of wasters were removed from the site during the construction of Boxted runway. Several wasters were discovered in 1943 whilst clearing a garden.
- 3.4.3 More recent records relate to the WWII Boxted Airfield (SMR 8913) constructed in 1944. Boxted airfield opened in May 1943, first with USAAF B-26 bombers and then various fighter units. The station closed in November 1946.
- 3.4.4 Boxted was a typical American wartime airfield equipped with three runways linked by a perimeter track, around which were placed 45 loop dispersals and six frying pan dispersals. The bomb stores were located on the east side on the site of two reservoirs, but twelve Nissen huts remain including three used for bomb fusing (TM 0200 3063), (TM0192 3060) (TM 0208 3061). Two T-2 hangars were built on opposite sides of the perimeter at TM 0084 0142 and TM 0185 2988 both of which have been removed. The main technical site was located on the south side of the airfield along Lodge Lane; today a

few Nissen huts may remain in agricultural use with a Blister hangar at TM 0154 2991.

- 3.4.5 The airfield is now cultivated and plantations; elements of the runways and the perimeter track remain at reduced width. The dispersed sites were built south of the airfield to Flood Lane. A few buildings remain on the main site in an unknown condition. Aerial photographs taken in year 2000 show some of the bomb stores buildings are still surviving on the east side of the airfield around TM 021 307. To the south, at the main technical site, a number of surviving buildings are apparent. These may include the Free Gunnery Trainer at TM 0154 2991, the Main Stores at TM 0178 2993, Crew Locker and Drying Room at TM 0169 2998 and Works Services Huts at TM 0170 2990.

4 METHODOLOGY

4.1 Excavation and Sampling

- 4.1.1 During the evaluation a total of 23 x 50m trial trenches and 3 x 25m trial trenches were excavated and recorded resulting in a 4% sample of the subject site. (Figure 2).
- 4.1.2 Ground reduction was carried out under archaeological supervision using a 14-ton wheeled mechanical excavator fitted with a 1.8m-wide toothless ditching bucket. Topsoil deposits were removed in spits down to the level of the undisturbed natural geological deposits where potential archaeological features could be observed and recorded. Exposed surfaces were cleaned by trowel and hoe as appropriate and all further excavation was undertaken manually using hand tools. Overburden deposits were set aside beside each trench and examined visually and with a metal-detector for finds retrieval.

4.2 Metal Detecting Survey

- 4.2.1 Metal-detecting was carried out during the topsoil stripping and throughout the excavation process. Archaeological features and spoilheaps were scanned by metal-detector as they were encountered/ created. This led to the discovery of SF1, a a Middle Bronze Age cast, copper alloy palstave axehead which was recovered from the ploughsoil upcast from Trench 9.
- 4.2.2 Following the discovery of the Bronze Age axehead, a full metal-detector survey of the site area was undertaken including an intensive survey of a 10m radius area around Trench 9. Metal detecting over the remainder of the site was carried out using a variant of the 'Essex method' (Meddlycott and Germany, 1994).
- 4.2.3 The site was sub-divided into 10m transects aligned north to south. Each transect was located using a Lieca 1200 GPS rover unit with real time kinematic (RTK) differential correction, providing accuracy to the nearest 2cm.
- 4.2.4 The team walked pre-assigned transects to a set pattern. No additional

metal finds of note were discovered.

4.3 Recording

- 4.3.1 Field excavation techniques and recording methods are detailed in the PCA Fieldwork Induction Manual (Operations Manual I) by Joanna Taylor and Gary Brown (2009).
- 4.3.2 All features were investigated and recorded in order to properly understand the date and nature of the archaeological remains on the site and to recover sufficient finds assemblages to assess the chronological development and socio-economic character of the site over time.
- 4.3.3 Discrete features such as pits and postholes were at least 50% excavated and, where considered appropriate, 100% excavated.

4.4 Recording Methodology

- 4.4.1 The limits of excavations, heights above Ordnance Datum (m OD) and the locations of archaeological features and interventions were recorded using a Leica 1200 GPS rover unit with RTK differential correction, giving three-dimensional accuracy of 20mm or better.
- 4.4.2 Manual plans and section drawings of archaeological features and deposits were drawn at an appropriate scale (1:10, 1:20 or 1:50).
- 4.4.3 Deposits or the removal of deposits judged by the excavating archaeologist to constitute individual events were each assigned a unique record number (often referred to within British archaeology as 'context numbers') and recorded on individual pre-printed forms (Taylor and Brown 2009). Archaeological processes recognised by the deposition of material are signified in this report by round brackets (thus), while events constituting the removal of deposits are referred to here as 'cuts' and signified by square brackets [thus]. The record numbers assigned to cuts and deposits are entirely arbitrary and in no way reflect the chronological order in which events took place. All features and deposits recorded during the evaluation are listed in Appendix 2. Artefacts recovered during excavation were assigned to the record number of the deposit from which they were retrieved.

- 4.4.4 High-resolution digital photographs were taken at all stages of the evaluation process. Digital photographs were taken of all archaeological features and deposits and black and white film photographs were taken when considered appropriate by the excavator and supervisor.
- 4.4.5 Artefacts and ecofacts were collected by hand and assigned to the record number of the deposit from which they were retrieved, receiving appropriate care prior to removal from the site (IfA 2001; Walker 1990; Watkinson 1981).
- 4.4.6 Charcoal was retained from three features, fire-pits [106], [108] and [118] for radiocarbon dating. The samples have been sent to SUERC and the results of these tests will be added to the report when they become available.

5 ARCHAEOLOGICAL SEQUENCE

5.1 Introduction

5.1.1 The trenches are described below in numerical order, with technical data tabulated. Features and deposits are described in numerical order within the trenches, where applicable. Archaeological features and deposits were sealed by the topsoil, unless otherwise stated. The evaluation identified three small fire pits, of a possible Late Iron Age date, as well as a series of undated small ditches of presumed agricultural function. The evaluation also uncovered a single Middle Bronze Age cast, copper alloy palstave axehead (See Beveridge p. 26), which was located within the interface of the Topsoil and the Natural and was not associated with any cut feature(s).

5.2 Trench 1

5.2.1 Trench 1 contained no archaeological features or deposits.

TRENCH 1	Figure 2	Plate N/A	
Trench Alignment: NE-SW	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		SW End	NE End
Topsoil	(100)	0.27m	0.28m
Natural	(102)	0.27m+	0.28m+
Summary			
Trench 1 was located in the south-west quadrant of the site area, it contained no archaeological features or deposits.			

5.3 Trench 2

5.3.1 Trench 2 contained no archaeological features or deposits.

TRENCH 2	Figure 2	Plate N/A	
Trench Alignment: N-S	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		N End	S End
Topsoil	(100)	0.31m	0.28m
Natural	(102)	0.31m+	0.28m+
Summary			

Trench 2 was located in the south-west quadrant of the site area, it contained no archaeological features or deposits.

5.4 Trench 3

5.4.1 Trench 3 contained no archaeological features or deposits.

TRENCH 3	Figure 2	Plate N/A	
Trench Alignment: E-W	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		SW End	NE End
Topsoil	(100)	0.29m	0.23m
Natural	(102)	0.50m+	0.49m+
Summary			
Trench 3 was located in the south-west quadrant of the site area, it contained no archaeological features or deposits.			

5.5 Trench 4

5.5.1 The trench contained a single undated ditch, which was aligned north-east to south-west and had a presumed agricultural function.

5.5.2 Ditch [104] was aligned north-west to south-east and extended across the north-western part of Trench 4 for 3.30m+, continuing in both directions beyond the limit of excavation. It was 0.35m wide and 0.07m deep, with a shallow convex profile. Its excavated fill was a light grey-brown sandy silt (103) which contained no finds.

TRENCH 4	Figures 2 and 3	Plate N/A	
Trench Alignment: NW-SE	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		SE End	NW End
Topsoil	(100)	0.27m	0.27m
Natural	(102)	0.27m+	0.27m+
Summary			
Trench 4 was located in the south-west quadrant of the site area.			
There was a single archaeological feature in the trench, comprising a single ditch, which contained no finds.			

5.6 Trench 5

5.6.1 The trench contained a single small pit, which contained a relatively large proportion of charcoal, suggesting that this feature may have functioned as a fire pit.

5.6.2 Pit [106] measured 0.60m long by 0.60m wide and was 0.10m deep. It was also roughly circular in plan, with moderately sloping concave sides and a concave base. It had a fill of dark grey charcoal-rich sand-silt (105) which contained no finds. Bulk samples (Sample 3) taken from pit [106] showed FREQUENT CHARCOAL INCLUSIONS (see Fryer, Section 6.2) and was retained for C14 dating.

TRENCH 5	Figures 2 and 4	Plate 2	
Trench Alignment: N-S	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		N End	S End
Topsoil	(100)	0.29m	0.28m
Natural	(102)	0.29m+	0.28m+
Summary			
Trench 5 was located in the south-west quadrant of the site area			
There was a single archaeological feature in the trench, comprising a single pit, which contained no finds.			

5.7 Trench 6

5.7.1 Trench 6 contained no archaeological features or deposits.

TRENCH 6	Figure 2	Plate N/A	
Trench Alignment: E-W	Length: 25m		
Deposit	Context No.	Average Depth (m)	
		E End	W End
Topsoil	(100)	0.26m	0.26m
Natural	(102)	0.26m+	0.26m+
Summary			
Trench 5 was located in the south-west quadrant of the site area, it contained no archaeological features or deposits.			

5.8 Trench 7

5.8.1 The trench contained a single undated ditch, which was aligned north-east to south-west and had a presumed agricultural function.

5.8.2 Ditch [114] was aligned north-east to south-west and extended across the eastern part of Trench 7 for 2m+, continuing to the south-west beyond the limit of excavation. It was 0.20m wide and 0.05m deep, with a shallow convex profile. Its excavated fill was a mid grey-brown sand-silt (113) which contained no finds.

TRENCH 7	Figures 2 and 5	Plate N/A	
Trench Alignment: E-W	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		E End	W End
Topsoil	(100)	0.24m	0.25m
Natural	(102)	0.24m+	0.25m+
Summary			
Trench 7 was located in the south-west quadrant of the site area			
There was a single archaeological feature in the trench, comprising a single ditch, which contained no finds.			

5.9 Trench 8

5.9.1 Trench 8 contained no archaeological features or deposits.

TRENCH 8	Figure 2	Plate N/A	
Trench Alignment: NW-SE	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		NW End	SE End
Topsoil	(100)	0.34m	0.32m
Natural	(102)	0.34m+	0.32m+
Summary			
Trench 8 was located in the south-east quadrant of the site area, it contained no archaeological features or deposits.			

5.10 Trench 9

5.10.1 The trench contained a single undated ditch, which was aligned north-west to south-east and had a presumed agricultural function. The Trench also

contained a Middle Bronze Age cast, copper alloy palstave axehead (SF1), located in the central area of the trench. This was not located within a cut feature, but was present within the lower horizon of the topsoil deposit.

5.10.2 Ditch [112] was aligned north-west to south-east and extended across the northern part of Trench 9 for 2m+, continuing in both directions beyond the limit of excavation. It was 0.28m wide and 0.04m deep, with a shallow convex profile. Its excavated fill was a mid brown-grey sand-silt (111) which contained no finds.

TRENCH 9	Figures 2 and 6	Plate 6	
Trench Alignment: N-S	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		N End	S End
Topsoil	(100)	0.25m	0.33m
Natural	(102)	0.25m+	0.33m+
Summary			
<p>Trench 9 was located in the south-east quadrant of the site area</p> <p>There was a single archaeological feature in the trench, comprising a single ditch, which contained no finds. The Trench also contained a Middle Bronze Age cast, copper alloy palstave axehead (SF1), located in the central area of the trench in the topsoil.</p> <p>The trench also contained a single treethrow [110].</p>			

5.11 Trench 10

5.11.1 Trench 10 contained no archaeological features or deposits.

TRENCH 10	Figure 2	Plate N/A	
Trench Alignment: NE-SW	Length: 25m		
Deposit	Context No.	Average Depth (m)	
		NE End	SW End
Topsoil	(100)	0.31m	0.28m
Natural	(102)	0.31m+	0.28m+
Summary			
Trench 10 was located in the south-east quadrant of the site area, it contained no archaeological features or deposits.			

5.12 Trench 11

5.12.1 The trench contained a single small pit, which contained a relatively large proportion of charcoal, suggesting that this feature may have functioned as a fire pit.

5.12.2 Pit [108] measured 0.85m long by 0.85m wide and was 0.15m deep. It was also roughly circular in plan, with moderately sloping concave sides and a flat base. It had a fill of mid-dark grey charcoal-rich sand-silt (107) which contained no finds. Bulk samples (Sample 1) taken from pit [108] showed FREQUENT CHARCOAL INCLUSIONS (see Fryer, Section 6.2) and was retained for C14 dating.

TRENCH 11	Figures 2 and 7	Plate 3	
Trench Alignment: N-S	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		N End	S End
Topsoil	(100)	0.27m	0.28m
Natural	(102)	0.27m+	0.28m+
Summary			
Trench 11 was located in the south-east quadrant of the site area			
There was a single archaeological feature in the trench, comprising a single pit, which contained no finds.			

5.13 Trench 12

5.13.1 Trench 12 contained no archaeological features or deposits.

TRENCH 12	Figure 2	Plate N/A	
Trench Alignment: E-W	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		E End	W End
Topsoil	(100)	0.28m	0.23m
Natural	(102)	0.28m+	0.23m+
Summary			
Trench 12 was located in the south-east quadrant of the site area, it contained no archaeological features or deposits.			

5.14 Trench 13

5.14.1 Trench 13 contained no archaeological features or deposits.

TRENCH 13	Figure 2	Plate N/A	
Trench Alignment: NE-SW	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		NE End	SW End
Topsoil	(100)	0.23m	0.30m
Natural	(102)	0.23m+	0.30m+
Summary			
Trench 13 was located in the south-east quadrant of the site area, it contained no archaeological features or deposits.			

5.15 Trench 14

5.15.1 The trench contained a single undated ditch, which was aligned north to south and had a presumed agricultural function.

5.15.2 Ditch [122] was aligned north to south and extended across the south-west part of Trench 9 for 2.20m+, continuing in both directions beyond the limit of excavation. It was 0.40m wide and 0.14m deep, with a shallow convex profile. Its excavated fill was a mid orange-brown clay-silt (121) which contained no finds.

TRENCH 14	Figures 2 and 8	Plate 5	
Trench Alignment: NE-SW	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		NE End	SW End
Topsoil	(100)	0.29m	0.30m
Natural	(102)	0.29m+	0.30m+
Summary			
Trench 14 was located in the north-west quadrant of the site area			
There was a single archaeological feature in the trench, comprising a single ditch, which contained no finds.			

5.16 Trench 15

5.16.1 Trench 15 contained no archaeological features or deposits.

TRENCH 15	Figure 2	Plate N/A	
Trench Alignment: E-W	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		E End	W End
Topsoil	(100)	0.32m	0.33m
Natural	(102)	0.32m+	0.33m+
Summary			
Trench 15 was located in the north-west quadrant of the site area, it contained no archaeological features or deposits.			

5.17 Trench 16

5.17.1 Trench 16 contained no archaeological features or deposits.

TRENCH 16	Figure 2	Plate N/A	
Trench Alignment: N-S	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		N End	S End
Topsoil	(100)	0.34m	0.26m
Natural	(102)	0.34m+	0.26m+
Summary			
Trench 16 was located in the north-west quadrant of the site area, it contained no archaeological features or deposits.			

5.18 Trench 17

5.18.1 Trench 17 contained no archaeological features or deposits.

TRENCH 17	Figure 2	Plate N/A	
Trench Alignment: N-S	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		N End	S End
Topsoil	(100)	0.27m	0.32m
Natural	(102)	0.27m+	0.32m+
Summary			
Trench 17 was located in the north-west quadrant of the site area, it contained no archaeological features or deposits.			

5.19 Trench 18

5.19.1 Trench 18 contained no archaeological features or deposits.

TRENCH 18	Figure 2	Plate N/A	
Trench Alignment: NW-SE	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		NW End	SE End
Topsoil	(100)	0.28m	0.30m
Natural	(102)	0.28m+	0.30m+
Summary			
Trench 18 was located in the north-west quadrant of the site area, it contained no archaeological features or deposits.			

5.20 Trench 19

5.20.1 Trench 19 contained no archaeological features or deposits.

TRENCH 19	Figure 2	Plate N/A	
Trench Alignment: E-W	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		W End	E End
Topsoil	(100)	0.36m	0.28m
Natural	(102)	0.36m+	0.28m+
Summary			
Trench 19 was located in the north-west quadrant of the site area, it contained no archaeological features or deposits.			

5.21 Trench 20

5.21.1 Trench 20 contained no archaeological features or deposits.

TRENCH 20	Figure 2	Plate N/A	
Trench Alignment: E-W	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		W End	E End
Topsoil	(100)	0.29m	0.31m
Natural	(102)	0.29m+	0.31m+
Summary			
Trench 20 was located in the north-west quadrant of the site area, it contained no			

archaeological features or deposits.

5.22 Trench 21

5.22.1 The trench contained 2 small pits, one of which, [118] contained a relatively large proportion of charcoal, suggesting that this feature may have functioned as a fire pit. The other pit, [120] was filled with material closely resembling the topsoil and was therefore presumed to be of a modern date.

5.22.2 Pit [118] measured 0.47m long by 0.47m wide and was 0.09m deep. It was also roughly circular in plan, with moderately sloping concave sides and a flat base. It had a fill of mid-dark grey charcoal-rich sand-silt (117) which contained no finds. Bulk samples (Sample 2) taken from pit [118] showed FREQUENT CHARCOAL INCLUSIONS (see Fryer, Section 6.2) and was retained for C14 dating.

5.22.3 Pit [120] measured 0.40m long by 0.40m wide and was 0.06m deep. It was also roughly circular in plan, with shallow sloping concave sides and a concave base. It had a fill of mid grey sand-silt (119) which contained no finds.

TRENCH 21	Figures 2 and 9	Plate 4	
Trench Alignment: NE-SW	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		NE End	SW End
Topsoil	(100)	0.27m	0.29m
Natural	(102)	0.27m+	0.29m+
Summary			
Trench 21 was located in the north-west quadrant of the site area			
There were 2 archaeological feature in the trench, comprising two small pits, which contained no finds.			

5.23 Trench 22

5.23.1 Trench 22 contained no archaeological features or deposits.

TRENCH 22	Figure 2	Plate N/A	
Trench Alignment: E-W	Length: 25m		
Deposit		Context No.	Average Depth (m)

		W End	E End
Topsoil	(100)	0.27m	0.31m
Natural	(102)	0.27m+	0.31m+
Summary Trench 22 was located in the north-east quadrant of the site area, it contained no archaeological features or deposits.			

5.24 Trench 23

5.24.1 Trench 23 contained no archaeological features or deposits.

TRENCH 23	Figure 2	Plate N/A	
Trench Alignment: NE-SW	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		SW End	NE End
Topsoil	(100)	0.26m	0.27m
Natural	(102)	0.26m+	0.27m+
Summary			
Trench 23 was located in the north-east quadrant of the site area, it contained no archaeological features or deposits.			

5.25 Trench 24

5.25.1 Trench 24 contained no archaeological features or deposits.

TRENCH 24	Figure 2	Plate N/A	
Trench Alignment: N-S	Length: 50m		
Deposit	Context No.	Average Depth (m)	
		N End	S End
Topsoil	(100)	0.28m	0.28m
Natural	(102)	0.28m+	0.28m+
Summary			
Trench 24 was located in the north-east quadrant of the site area, it contained no archaeological features or deposits.			

5.26 Trench 25

5.26.1 Trench 25 contained no archaeological features or deposits.

TRENCH 25	Figure 2 and 10	Plate N/A
------------------	------------------------	------------------

Trench Alignment: N-S		Length: 50m	
Deposit	Context No.	Average Depth (m)	
		N End	S End
Topsoil	(100)	0.29m	0.33m
Natural	(102)	0.29m+	0.33m+
Summary Trench 25 was located in the north-east quadrant of the site area, it contained no archaeological features or deposits. The trench contained a single treethrow [116].			

5.27 Trench 26

5.27.1 Trench 26 contained no archaeological features or deposits.

TRENCH 26	Figure 2	Plate N/A	
Trench Alignment: NE-SW		Length: 50m	
Deposit	Context No.	Average Depth (m)	
		NE End	SW End
Topsoil	(100)	0.30m	0.31m
Natural	(102)	0.30m+	0.31m+
Summary Trench 26 was located in the north-east quadrant of the site area, it contained no archaeological features or deposits.			

6 THE FINDS AND ENVIRONMENTAL EVIDENCE

6.1 Prehistoric Metalwork

By Ruth Beveridge

- 6.1.1 A single object of copper alloy was recovered during the trenching work and is catalogued below. It was found in Trench 9, lying on top of the natural soil surface.

Copper Alloy

- 6.1.2 <1>, 100 A complete cast, copper alloy palstave axehead. The surface of the palstave is heavily corroded and shows some damage from the extraction method used.
- 6.1.3 In plan, the undecorated blade of the palstave is sub-triangular with a slightly curving cutting edge. In profile, the blade is triangular with the widest section being just before the stop ridge. The stop ridge is H-shaped in cross-section. This stop ridge would have prevented the butt of the palstave from splitting the handle. Just below the stop ridge at the top of the blade is a semi-circular ridge with central rib forming a 'shield-pattern'.
- 6.1.4 The butt-end of the palstave is rectangular in plan, and triangular in profile, with the widest point again being at the stop ridge. On both faces, flanges rise to form the stop ridge. These flanges have been damaged and are incomplete.
- 6.1.5 The palstave measures 141mm in length. Its widest point, the cutting edge, is 47mm and at the stop ridge it is 25mm thick. The stop ridge is 56mm in from the butt end.
- 6.1.6 It is probably a Schmidt and Burgess (1981) Group I 'shield-pattern' palstave type from the Acton Park phase metalwork. This type of palstave dates from the Middle Bronze Age (1500 - 1300 BC).
- 6.1.7 Similar examples to this palstave can be seen in Savory (1980), Fig 19-21.

Recommendations for further work

- 6.1.8 The axehead should be x-rayed to preserve a clear depiction of the object

and also to reveal further information beneath the corrosion, primarily checking for detail on the blade and confirming absence of the side loop; it could also be cleaned and stabilised.

SF	Context	Material	Object	Type	Description	Object date	Width	Length	Extent
1	100	Copper alloy	Palstave	Group I 'shield pattern' type	Complete cast unlooped palstave with curved cutting edge and stop ridge, H-shaped in section. Flanges on the sides of the butt end form this stop ridge.	1500 - 1300 BC	47mm	141 mm	Complete
Table 1: ARBT15, Betts Factory Metalwork Catalogue									

6.2 Plant Macrofossils

By Val Fryer

- 6.2.1 Samples for the evaluation of the content and preservation of the plant macrofossil assemblages were taken from the charcoal rich pit fills and three were submitted for assessment. Charcoal fragments have been submitted for C14 dating (report to follow).
- 6.2.2 The samples were bulk floated by PCA and the flots were collected in a 300 micron mesh sieve. The dried flots (or sub-samples thereof) were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed below in Table 1. All plant remains were charred. Modern roots, seeds, chaff and fungal sclerotia were also recorded.

Results

- 6.2.3 Although all three assemblages are relatively large (i.e. 0.4 – 0.6 litres in volume), they are very limited in scope, being almost entirely composed of charcoal/charred wood. Much of the material is of large size (>5mm) and well preserved, showing little evidence of abrasion. Roundwood specimens appear to be absent, although the assemblage from sample 3 (pit [106]) does contain one small fragment of charred root or stem. Much of the material has a light coating of a red/orange mineral concretion, which is probably ferrous in origin.
- 6.2.4 The only other material recovered is a single small piece of coal noted within sample 1 (pit [108]). It is thought most likely that this is intrusive within the feature fill.

Conclusions

- 6.2.5 In summary, these assemblages are somewhat unusual as they are so limited in composition. As there is no evidence for in situ burning, it would appear most likely that the material was deposited from elsewhere, but the nature of the activity which created three such similar assemblages remains unclear. The use of large wood may suggest that it involved reasonably high temperatures of combustion, but unless identification of the charcoal is

undertaken, this hypothesis will remain speculative.

6.2.6 Although these assemblages are limited, they are clearly indicative of the use of wood/charcoal for what appears to be a very specific purpose.

Sample No.	1	2	3	
Context No.	107	117	105	
Feature No.	108	118	106	
Trench No.	11	21	5	
Charcoal <2mm	xxxx	xxxx	xxxx	Key:
Charcoal >2mm	xxxx	xxxx	xxxx	x = 1 specimen
Charcoal >5mm	xxx	xxxx	xxxx	xx = 11 – 50 specimens
Charcoal >10mm	xx	xxxx	xxx	xxx = 51 – 100 specimens
Charred root/stem			x	xxxx = 100+ specimens
Small coal frag.	x			
Sample volume (litres)				
Volume of flot (litres)	0.4	0.6	0.4	
% flot sorted	50%	25%	50%	

Table 2. Charred plant macrofossils and other remains

7 DISCUSSION & CONCLUSIONS

7.1 Prehistoric Activity

- 7.1.1 In general the level of archaeological evidence identified during the evaluation was sparse, however the principal results of the evidence that was discovered during the evaluation lay within the prehistoric period. The earliest archaeological evidence on the site was SF1, a Middle Bronze Age cast, copper alloy palstave axehead. Although other examples of this type are not common in the region, they are of a type that is commonly found in hoards, and associated with settlement evidence. Although the evaluation and metal-detecting survey of the area did not reveal more archaeological evidence of this period within the site boundaries, it is possible that these features may be present in the local area, outside the site. Due to its position within the topsoil, not within any cut feature it is not possible to speculate whether the palstave represents a ritual deposit or accidental loss.
- 7.1.2 The other point of interest identified during the evaluation was based on three small fire-pits, which have been tentatively assigned to the Late Iron Age period prior to the results of the radiocarbon dating undertaken on deposits within these pits. This assignation was based on their similarity to other examples in the local area which have been Late Iron Age to Early Roman in date (Dyson 2015) (Crossan 2001). Although the lack of finds within these examples and this feature type in general mitigates against detailed interpretation, the consistently small size and similar form of these features would suggest a common function. It is likely that this function revolved around the use of burning wood or charcoal as a heat source, as the small size and lack of associated finds within these features would seem to make an industrial or food preparation function unlikely.
- 7.1.3 The remaining archaeological features present within the trenches consisted of limited numbers of small, shallow undated ditches and a single small undated pit. These features are mainly of a roughly similar north-west to south-east alignment and are likely to be of a post-medieval date.
- 7.1.4 These results can be characterised as being of local importance. Therefore it

is concluded that no further archaeological work will be required.

8 ACKNOWLEDGEMENTS

- 8.1 Pre-Construct Archaeology Ltd would like to thank Jim Hunter of WSP Parsons Brinkerhoff for commissioning the work on behalf of Lands Improvement Holdings, Colchester and Anthill Plant for operating the excavator. PCA are also grateful to Adrian Gascoyne of Essex County Council's Place Services Team for their advice and for monitoring the work. The author would like to thank Taleyna Fletcher for managing the project. The author would also like to thank the project team: Steve Porter and Tom Learmonth for their hard work, and finally PCA's CAD department for preparing the figures.

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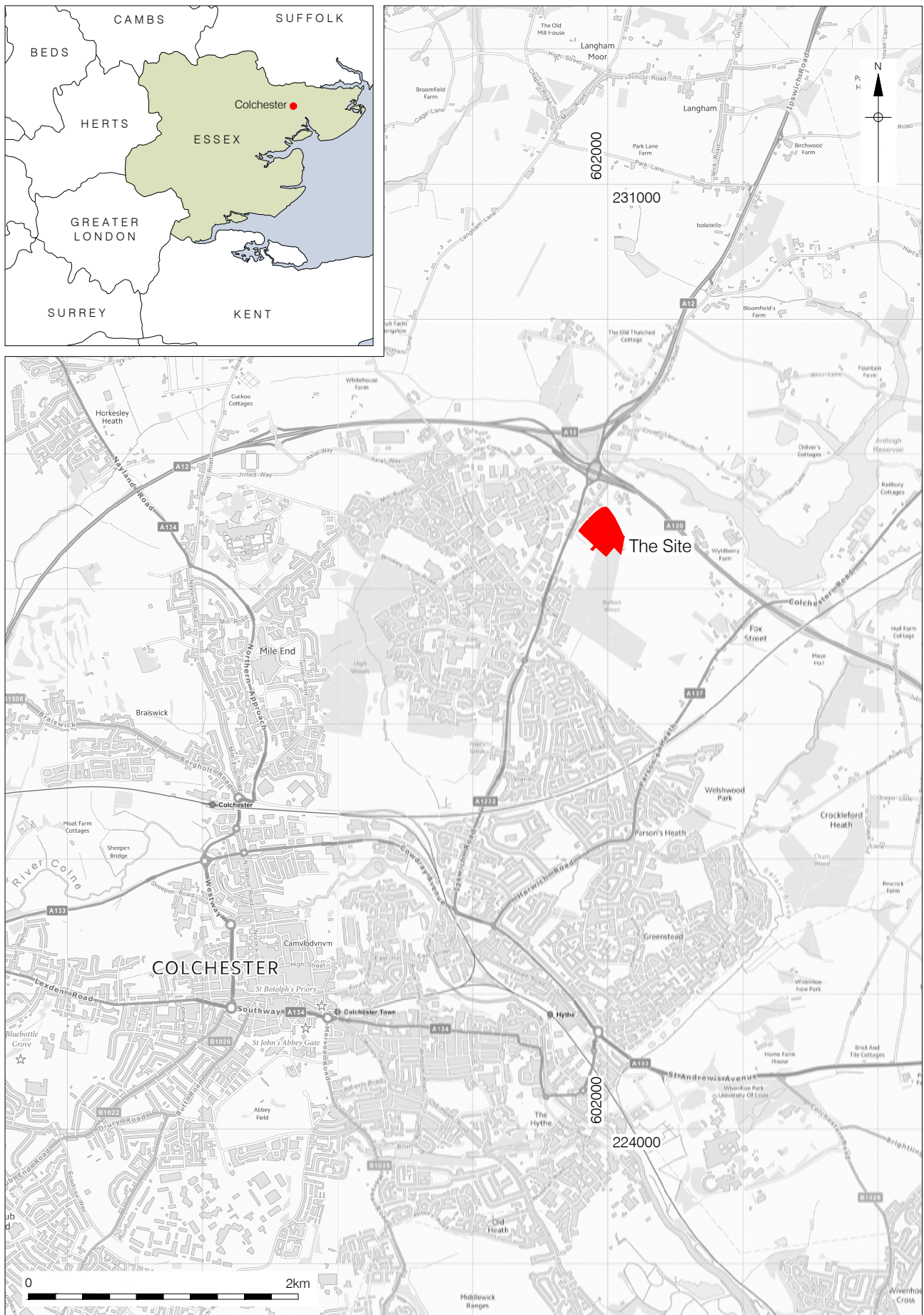
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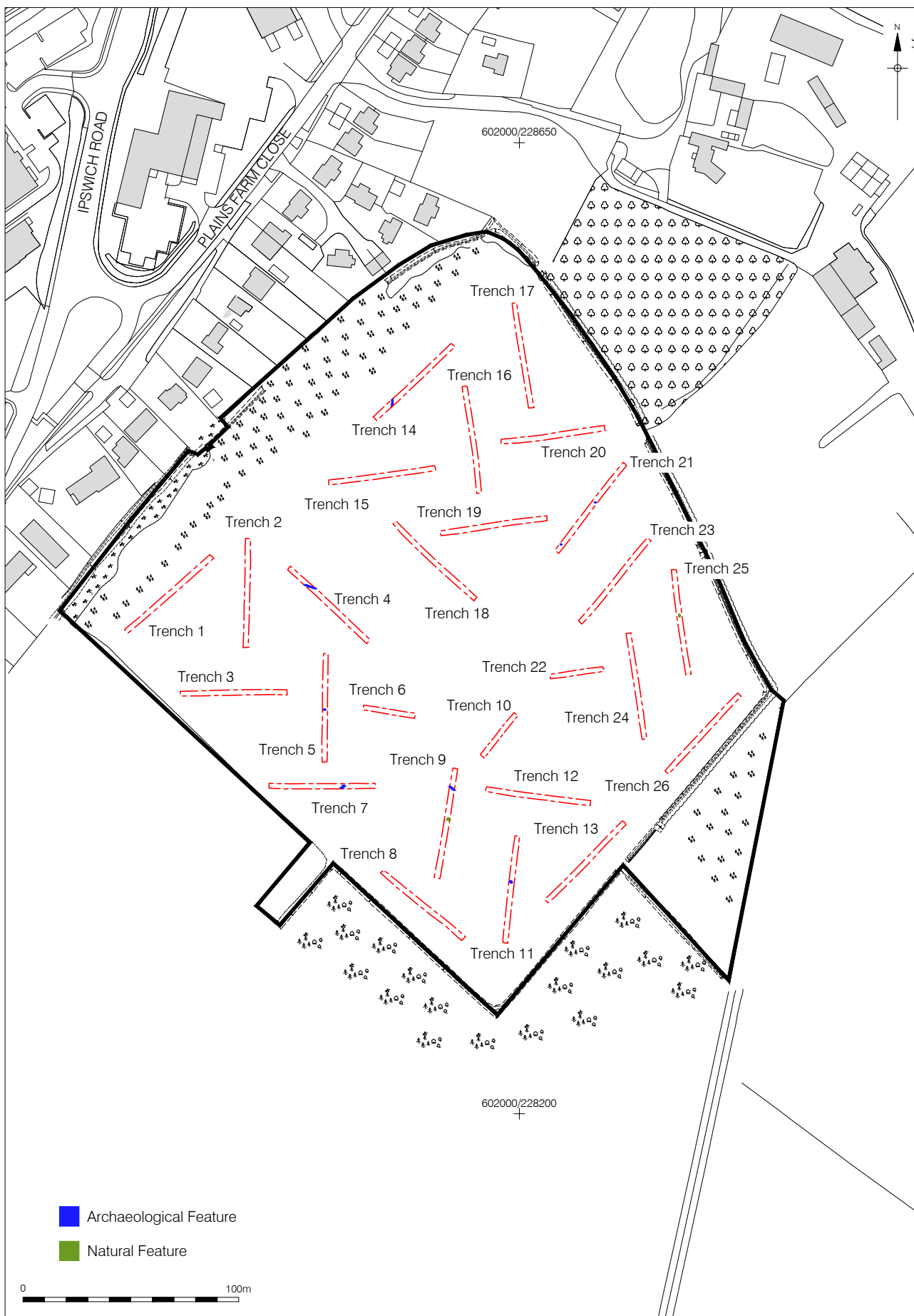
9.2 Websites

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Figure 1
 Site Location
 1:2,000,000; 1:40,000 at A4



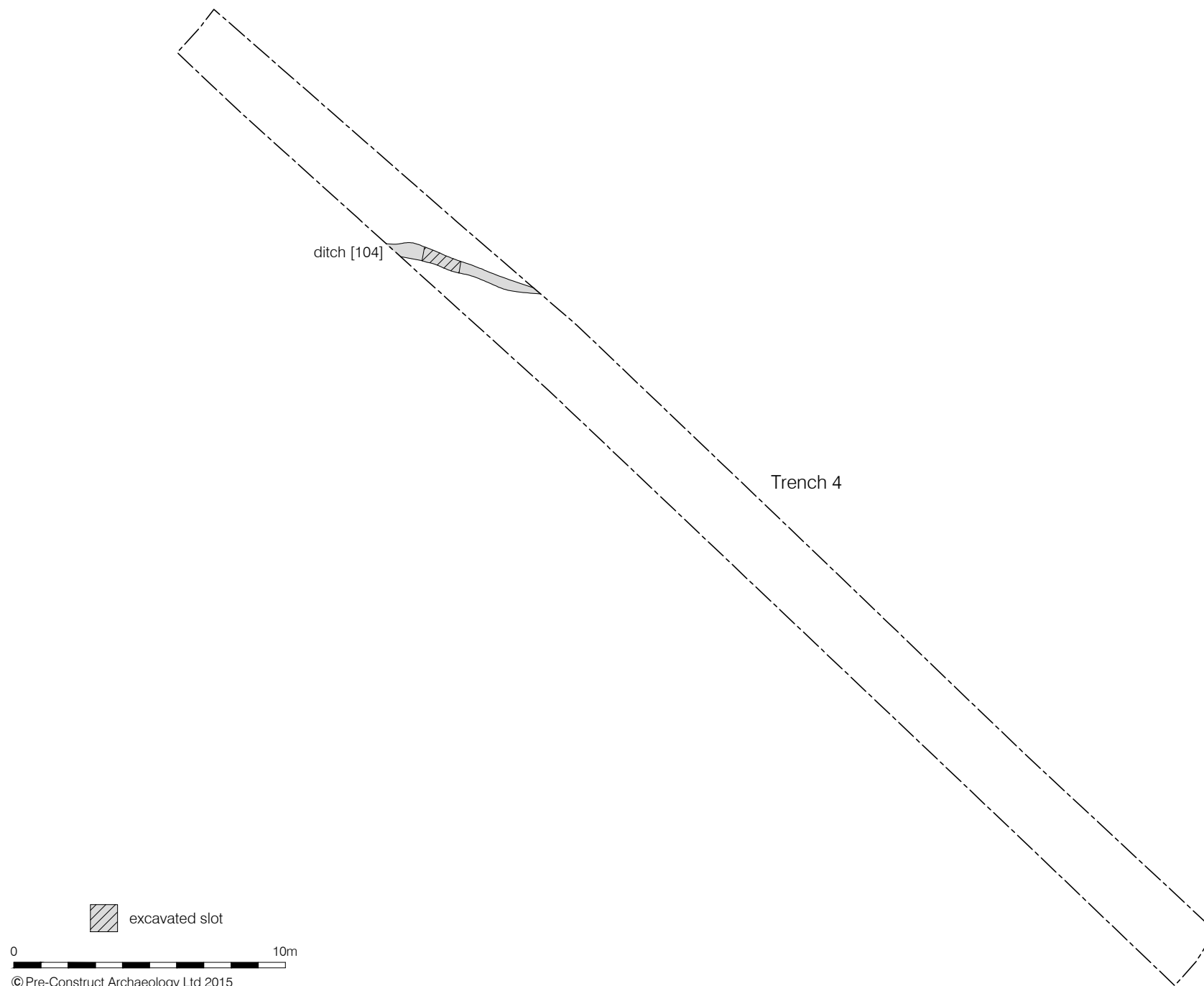
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14/07/15 JS (revision 1)

Figure 2
Trench Location
1:2,500 at A4



0 10m
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Figure 3
Plan of Trench 4
1:200 at A4

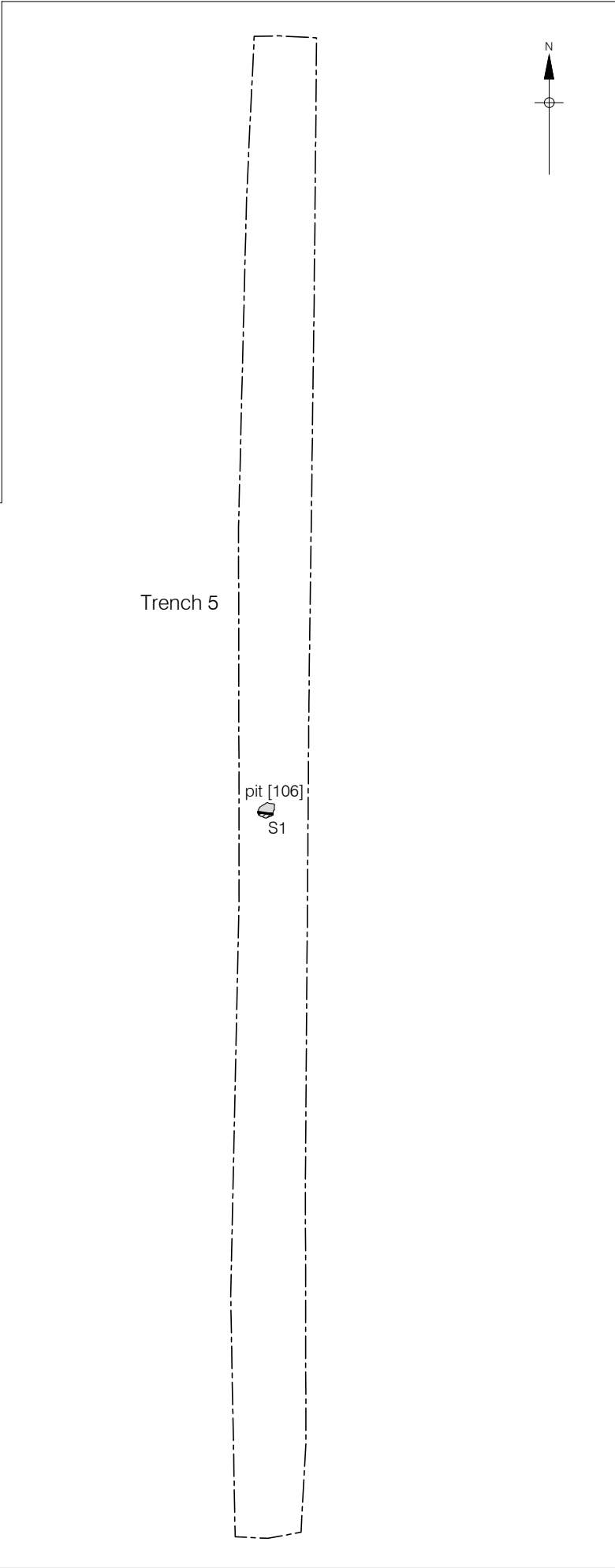
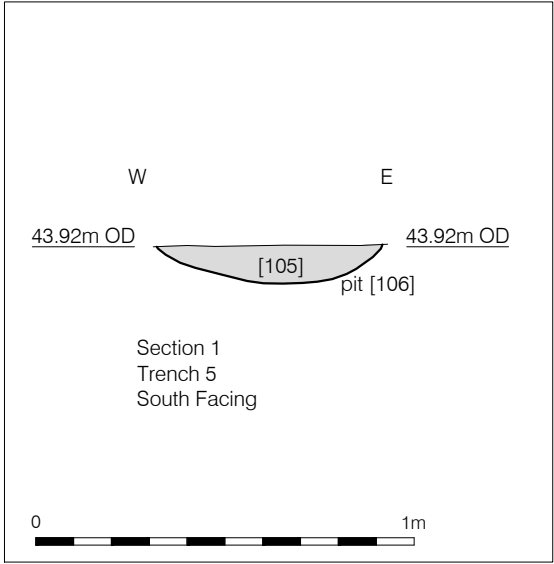
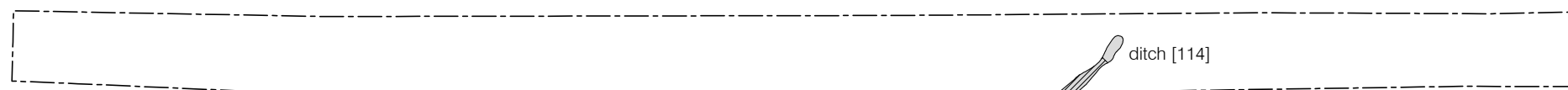


Figure 4
Trench 5 Plan and Section
Plan 1:200 and Section 1:20 at A4



Trench 7



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14/07/15 JS (revision 1)

Figure 5
Plan of Trench 7
1:200 at A4

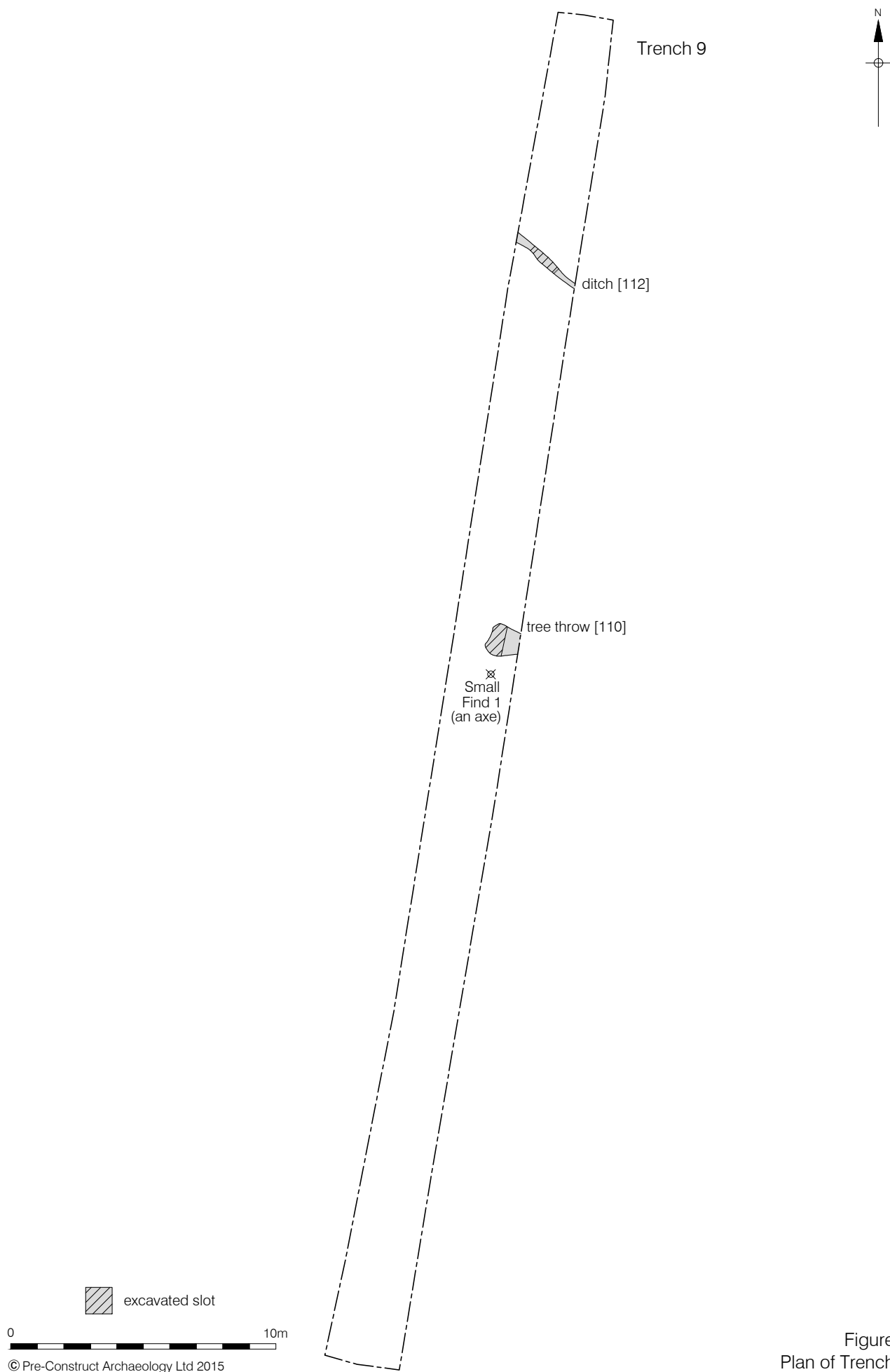
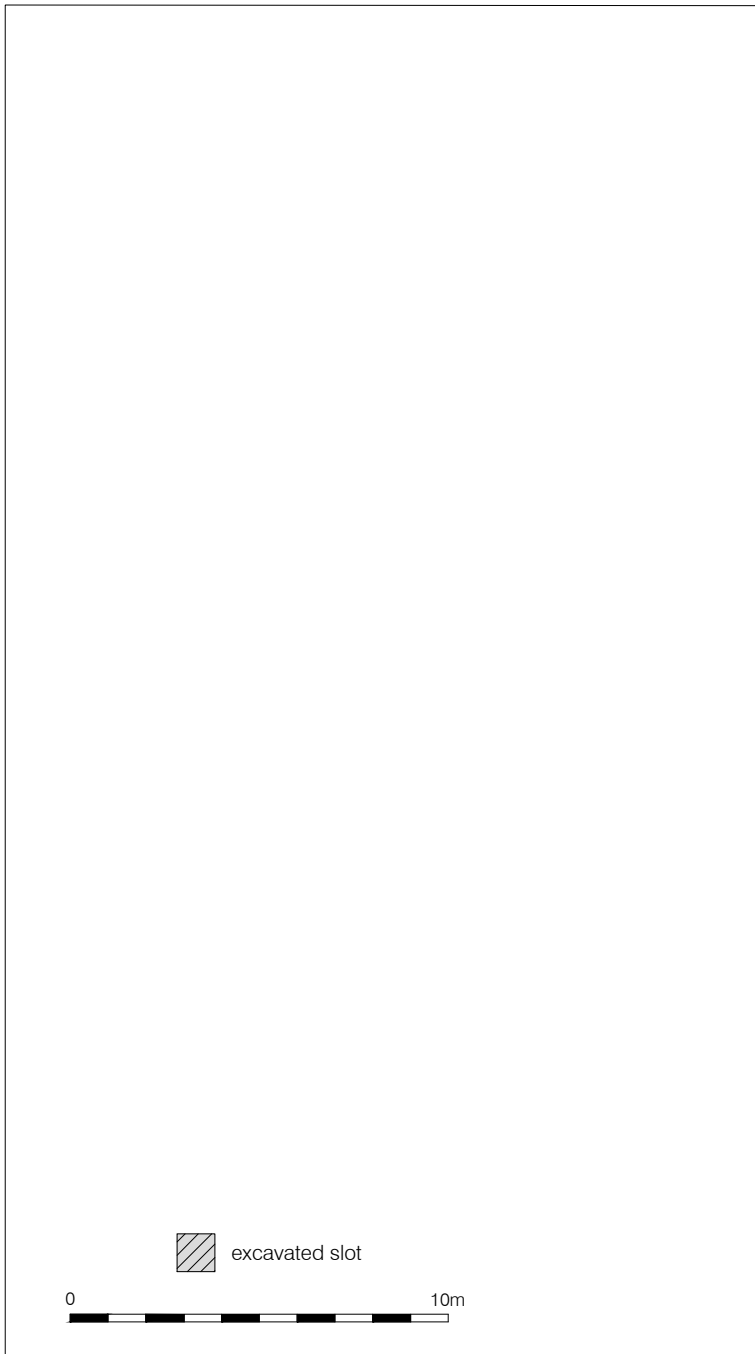
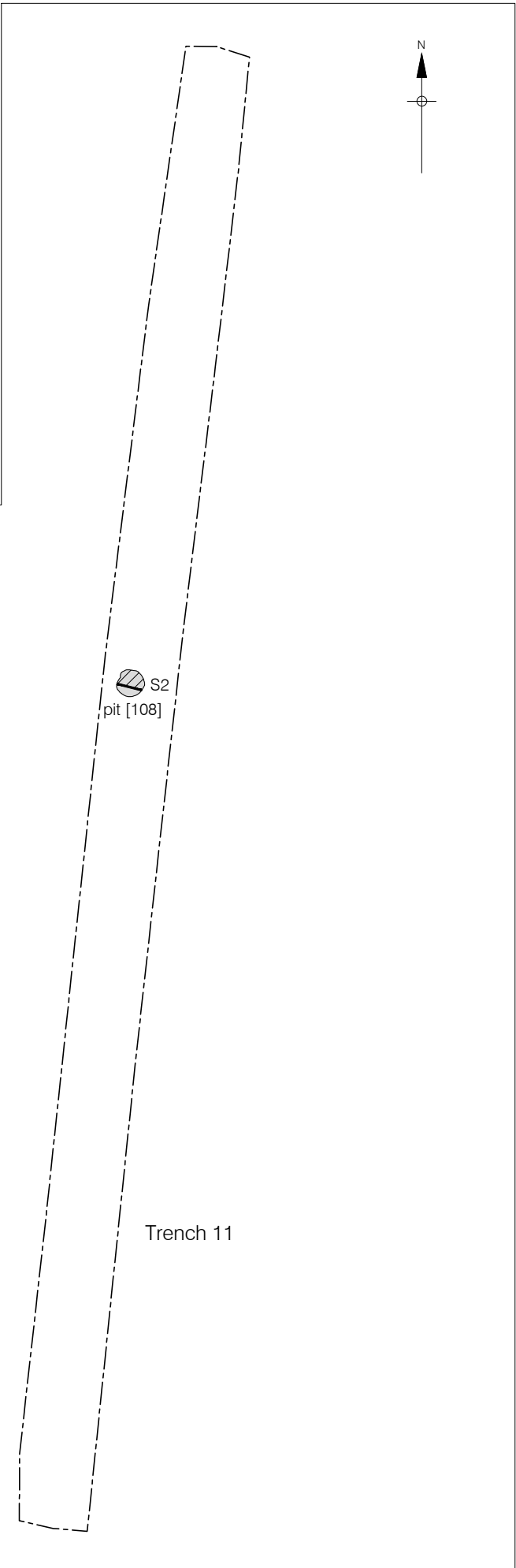
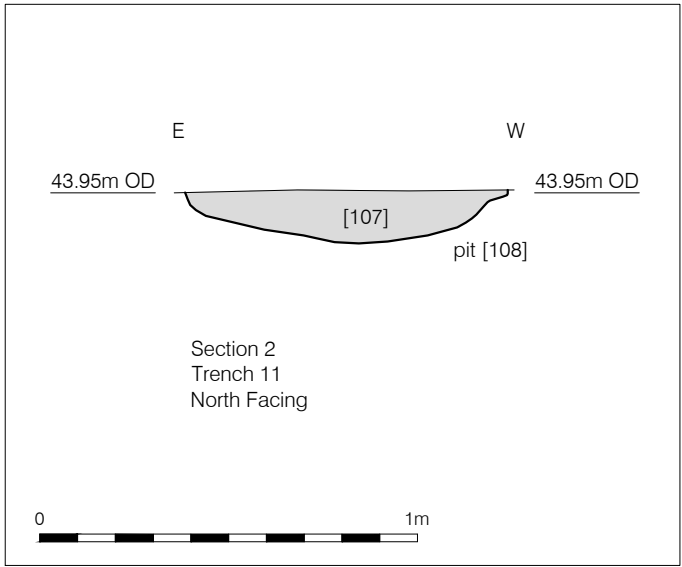


Figure 6
Plan of Trench 9
1:200 at A4





Trench 14

ditch [122]



excavated slot



Figure 8
Plan of Trench 14
1:200 at A4

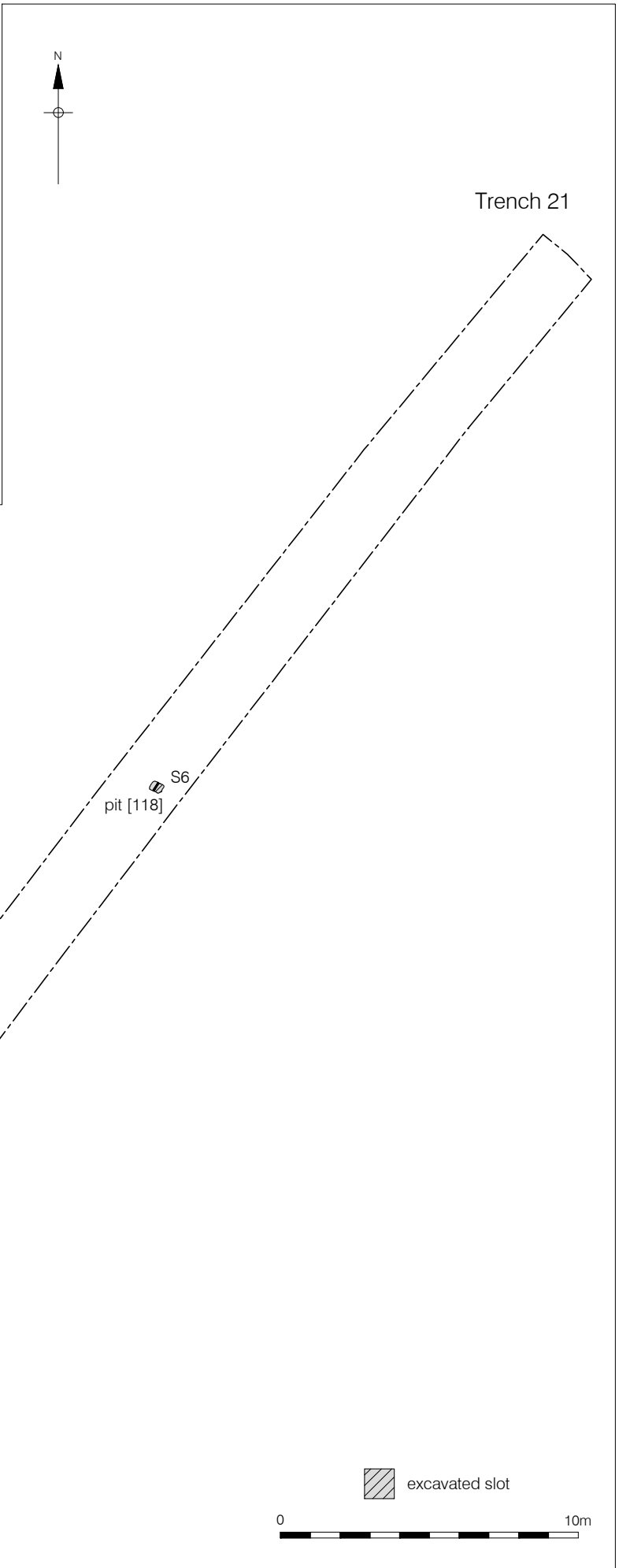
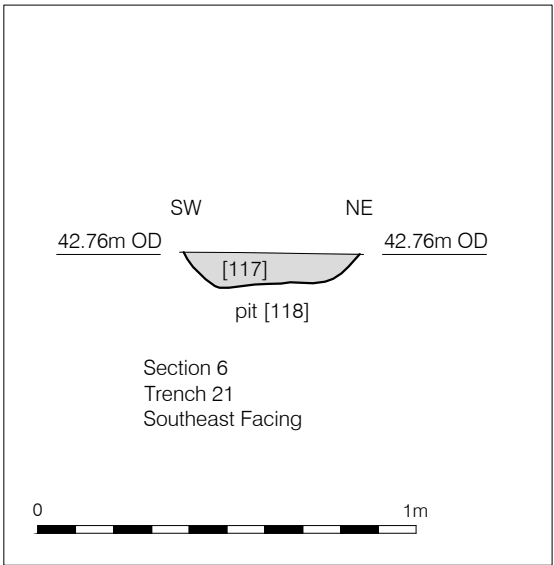
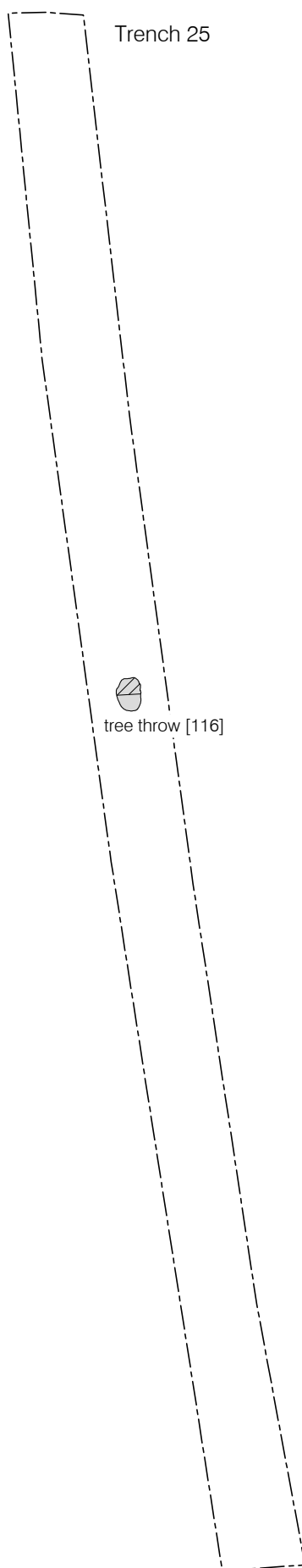


Figure 9
Trench 21 Plan and Section
Plan 1:200 and Section 1:20 at A4



Trench 25

tree throw [116]



0 10m

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14/07/15 JS (revision 1)

Figure 10
Plan of Trench 25
1:200 at A4

10 APPENDIX 1: PLATES



Plate 1: Pre-excavation, view north-east



Plate 2: Pit [106], Trench 5, view north



Plate 3: Pit [108], Trench 11, view south



Plate 4: Pit [118], Trench 21, view north-east

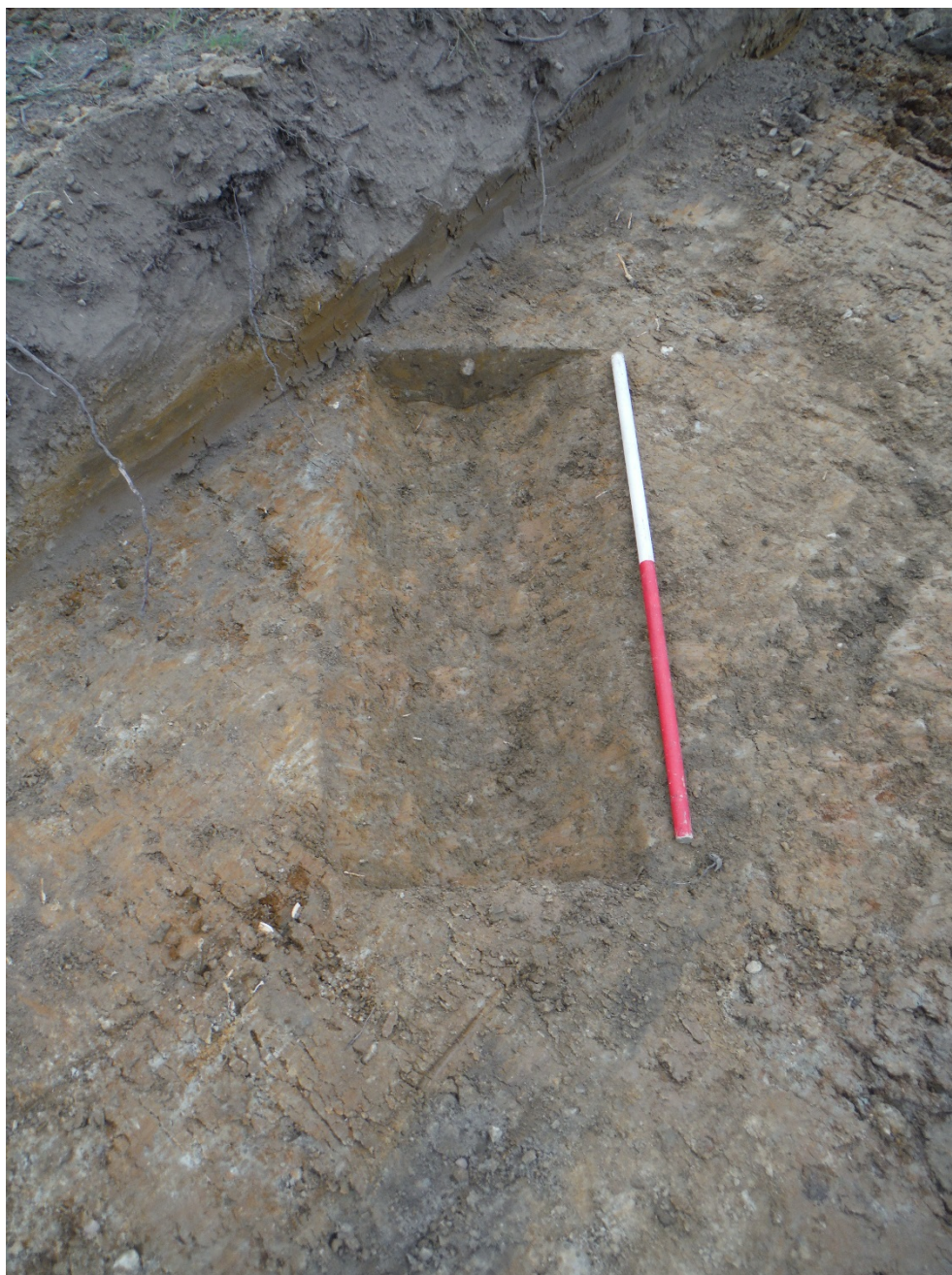


Plate 5: Ditch [122], Trench 14, view north



Plate 6: SF1 Copper alloy palstave axehead, Trench 9 view east



Plate 7: SF1 Copper alloy palstave axehead

11 APPENDIX 2: CONTEXT INDEX

Context	Cut	Type	Category	Interpretation	Trench Number
100	-	L	Topsoil	-	All
101	-	L	Subsoil	-	None
102	-	L	Natural	-	All
103	104	F	Ditch	Boundary/Drainage	4
104	104	C	Ditch	Boundary/Drainage	4
105	106	F	Pit	Fire-pit	5
106	106	C	Pit	Fire-pit	5
107	108	F	Pit	Fire-pit	11
108	108	C	Pit	Fire-pit	11
109	110	F	Treethrow	-	9
110	110	C	Treethrow	-	9
111	112	F	Ditch	Boundary/Drainage	9
112	112	C	Ditch	Boundary/Drainage	9
113	114	F	Ditch	Boundary/Drainage	7
114	114	C	Ditch	Boundary/Drainage	7
115	116	F	Treethrow	-	25
116	116	C	Treethrow	-	25
117	118	F	Pit	Fire-pit	21
118	118	C	Pit	Fire-pit	21
119	120	F	Pit	Refuse	21
120	120	C	Pit	Refuse	21
121	122	F	Ditch	Boundary/Drainage	14
122	122	C	Ditch	Boundary/Drainage	14

12 APPENDIX 3: OASIS FORM

OASIS ID: preconst1-217248

Project details

Project name Land North-East of Betts Factory, Colchester, Essex: An Archaeological Trial Trench Evaluation

Short description of the project This report describes the results of an archaeological trial trench evaluation carried out by Pre-Construct Archaeology on land north-east of Betts Factory, Colchester, Essex (NGR TM 01960 28422) between the 29th of June and the 8th of July 2015. The archaeological work was commissioned by Jim Hunter of WSP Group in response to an archaeological brief issued by Adrian Gascoyne, the Historic Environment Advisor of Essex County Council's Place Services Team (ECCPST). The aim of the work was to characterize the archaeological potential of the proposed development area. The principal result of the evaluation was the discovery of three small fire pits, of a possible Late Iron Age to early Roman date as well as a series of undated small ditches of presumed agricultural function. The evaluation also uncovered a single Middle Bronze Age cast, copper alloy palstave axehead, which was located within the interface of the Topsoil and the Natural and was not associated with any cut feature(s).

Project dates Start: 29-06-2015 End: 08-07-2015

Previous/future work No / Not known

Any associated project reference codes ARBT15 - Sitecode

Type of project Field evaluation

Site status None

Current Land use Other 13 - Waste ground

Monument type PIT Late Iron Age

Monument type DITCH Uncertain

Significant Finds AXE Middle Bronze Age

Project location

Country England

Site location ESSEX TENDRING ARDLEIGH Land North-East of Betts Factory,
Colchester

Postcode CO7 7QU

Study area 6.40 Hectares

Site coordinates TM 01960 28422 51.9171165833 0.937032626425 51 55 01 N 000 56
13 E Point

Height OD / Min: 0.28m Max: 0.42m

Depth

Project creators

Name of PCA

Organisation

Project brief Essex County Council

originator

Project design Mark Hinman

originator

Project Taleyna Fletcher

director/manager

Project Lawrence Morgan-Shelbourne

supervisor

Type of Developer

sponsor/funding
body

Name of WSP Group, Mr Jim Hunter

sponsor/funding
body

Project archives

Physical Archive Colchester Museum

recipient

Physical "Metal"

Contents

Digital Archive Colchester Museum

recipient

Digital Contents "Metal"

Digital Media "Database","Survey","Text"
available

Paper Archive Colchester Museum
recipient

Paper Contents "Metal"

Paper Media "Context sheet","Map","Photograph","Plan","Report","Section","Survey "
available

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