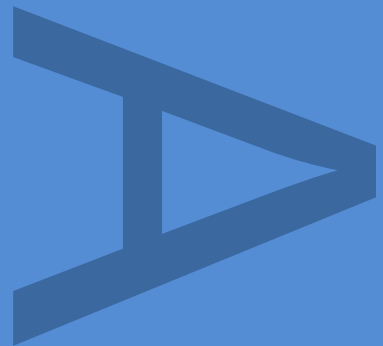


**BLACKWATER TRADING ESTATE,
THE CAUSEWAY, MALDON, ESSEX**



ARCHAEOLOGICAL WATCHING BRIEF



PCA REPORT NO: R12302

DECEMBER 2015


PRE-CONSTRUCT ARCHAEOLOGY

DOCUMENT VERIFICATION

BLACKWATER TRADING ESTATE, THE
CAUSEWAY, MALDON, ESSEX

AN ARCHAEOLOGICAL WATCHING BRIEF

Quality Control

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BLACKWATER TRADING ESTATE, THE CAUSEWAY, MALDON, ESSEX:

An Archaeological Watching Brief

Local Planning Authority: Essex County Council

Planning Application Number: MAL/14/00861

Central National Grid Reference: TL 8537 0754

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December 2015

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1 ABSTRACT

- 1.1 An archaeological watching brief was conducted by Pre-Construct Archaeology Ltd (PCA) during the excavation of contamination and geotechnical trial pits associated with new development at The Blackwater Trading Estate, The Causeway, Maldon, Essex. The monitoring took place upon 25th November 2015, was commissioned by Mills Whipp Projects.
- 1.2 The works comprised the excavation seven contamination and geotechnical trial pits undertaken in advance of the proposed development.
- 1.3 The site is comprised of former marshland within the Blackwater Estuary and has been subject to several phases of reclamation since the late post-medieval period.
- 1.4 The archaeological watching brief suggests that cutting of a dock in the north and east of the site in the 19th century is likely to have removed all potential earlier archaeological remains in these areas, whilst the construction of railway tracks and associated landscaping has also impacted on below ground deposits, especially to towards the north of the site. However organic deposits recorded to the west and the south of the site may represent buried former dry land surfaces.

2 INTRODUCTION

- 2.1 An archaeological watching brief was conducted by Pre-Construct Archaeology Ltd during the excavation contamination and geotechnical trial pits at The Backwater Trading Estate, The Causeway, Maldon, Essex (Figure 1).
- 2.2 The investigation was conducted on excavations undertaken on 25th November 2015 by Guy Seddon, and was managed by Tim Bradley, both of Pre-Construct Archaeology Limited. The work was commissioned by Mills Whipp Projects and monitored by Maria Medlycott, Historic Environment Officer, Essex County Council.
- 2.3 The site is located between Heybridge and Maldon on the eastern bank of the River Chelmer. It is bounded to the north-west by the B1018, to the north-east by industrial units, to the south west by residential units and The Combined Military Service Museum and to the south-east by Heybridge Creek.
- 2.4 The site is situated on relatively level ground at approximately 4.00m AOD.
- 2.5 The work was undertaken in accordance with the Written Scheme of Investigation issued by PCA Ltd in November 2015.¹ The WSI was approved by Place Services of Essex County Council.
- 2.6 The central National Grid Reference for the site is TL 8537 0754.

¹ PCA 2014 *The Causeway, Maldon, Essex; Written Scheme of Investigation for Archaeological Monitoring of Contamination and Geotechnical Test Pits* PCA Unpublished Report

3 GEOLOGY AND TOPOGRAPHY

3.1 Geology

3.1.1 The 1:50,000 series Geological Survey (Chelmsford: Sheet 241) indicates that the site is underlain by First River Terrace Deposits forming 'an island' of naturally higher ground on the edge of the alluvial floodplain.

3.2 Topography

3.2.1 The site was subject to a sequence of reclamation since the post-medieval period if not earlier. The current ground level is approximately 4m OD.

3.2.2 The remains of a former incomplete dock extend along the northern boundary of the site. Further remains currently in the form of two ponds lie to the east of the site.

3.2.3 The Heybridge Creek flows approximately 250m east of the site into the River Blackwater estuary.

3.2.4 The current banks of the River Blackwater lie approximately 250m north of the study site and the River Chelmer approximately 500m south of the site.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The following is taken from the Archaeological Desk Based Assessment².

4.1 Paleolithic

4.1.1 No evidence of Palaeolithic activity has been recorded within the vicinity of the study site.

4.2 Mesolithic and Neolithic

4.2.1 During the Mesolithic period the River Blackwater was a shallow valley freshwater river unaffected by the sea level rise which was taking place out in the North Sea.

4.2.2 No evidence of Mesolithic or Neolithic activity has been recovered within the vicinity of the site although evidence of Neolithic occupation activity was found on the gravels to the north of the Blackwater at Elms Farm approximately 1km north west of the site.

4.3 Bronze Age and Iron Age

4.3.1 During the Bronze Age there was an increase in settlement and agricultural activity within the area with pasture available for use on the salt marshes of the estuary formed by the rise in sea level.

4.3.2 Evidence of Bronze Age ring ditches have been identified on the gravels to the north of the bank of the River Blackwater during excavations at Elms Farm approximately 1km north west of the study site.

4.3.3 By the Iron Age Heybridge had become a significant port. A substantial Iron Age settlement was discovered during excavations at Elms Farm approximately 1km north-west of the study site. The importance of this settlement was confirmed by the extensive amount of high status trade goods recovered.

4.3.4 An Iron Age settlement was found at Heybridge Hall approximately 500m north east of the study site on the other side of the Blackwater River. To the north a possible Iron Age bank and ditch was found at Heybridge Cemetery approximately 500m north east of the study site.

4.3.5 During the Late Iron Age salt production began along the estuary and remains of 'red hills' close to creeks and estuaries have been recovered. The sites location on the edge of the saltmarsh may have made this an ideal location for this industrial activity.

4.3.6 These periods comprised of phases of marine transgression and regression. During periods of regression the site may have been utilised for pasture or salt production.

4.4 Roman

4.4.1 By the Roman period Heybridge continued to be a significant trading port. The excavations at Elms Farm confirmed a continuation of settlement into the Roman period. In addition further evidence of Roman activity on the northern boundaries of the Blackwater were found at Heybridge Hall where excavations revealed evidence of Roman ditches approximately 500m north east of the study site

² CgMs 2014 *Archaeological Desk Based Assessment Blackwater Trading Estate, The Causeway, Maldon* CgMs Consulting Unpublished Report

and a Roman cemetery is recorded at Heybridge approximately 400m north west of the study site. Roman activity or a settlement site is recorded at 39-45 Crescent Road, Heybridge. An early Roman settlement site was recorded at Heybridge-Longford Junction during construction of the railway in 1888.

4.4.2 A number of urns and coins were found approximately 300m north-west of the study site within the former alluvial floodplain. These deposits may potentially signify a Roman cemetery site close to the banks of the river Blackwater.

4.4.3 It is likely that during these periods the study site was either inundated or comprised of marshland. During the Roman period salt production continued along the salt marshes so evidence of industrial activity could be present deep beneath the reclamation layers.

4.5 Anglo Saxon and Early Medieval

4.5.1 The Saxons settled in Maldon with the focus of their settlement around All Saints Church. It was close to the Saxon settlement that the Burgh (fortified town) was located sometime before 1016.

4.5.2 The study site most likely lay within marshland during these periods and for this reason has a low archaeological potential.

4.6 Late Medieval and Post Medieval

4.6.1 Maldon is recorded in the Domesday Survey of 1086 as a significant town and port. The medieval core developed around All Saints Church and along the High Street with a small localised area around Fullbridge to the south of the site.

4.6.2 The Causeway was partly built along the natural gravels that lay within and to the west of the site. The gravel 'island' allowed for the easiest route across the marsh via the Fullbridge that crossed the River Chelmer approximately 500m south of the site. The date of the Causeway across the marsh from Maldon to Heybridge is unknown but it was certainly in use by the 14th century as Edward II ordered its survey in 1324 which suggests the importance of the route by this date. The piecemeal embankment and drainage of the marshes began in the medieval period and early post-medieval period and can be observed in early maps.

4.6.3 The 1768 map of Maldon and the 1777 Chapman and Andre show the location of the site within marshland known as Potman Marsh bound to the east by The Causeway.

4.7 Modern

4.7.1 The 1805 Ordnance Survey shows little change to the site. By the late 18th century significant land reclamation had taken place signified by the straight field boundaries on the maps. By the 1841 Tithe map the site comprised of meadow and drainage ditches.

4.7.2 The Maldon East Railway station was built in 1846. The station building lies just outside the southern boundary of the site but the railway lines and Goods Shed lay within the application site. The 1874 Ordnance Survey shows that by this date a dock had been cut out of the meadowland in the north of the site, leading out into the creek. The remainder of the site comprised of railway lines, sidings and the goods shed.

4.7.3 Between 1960 and 1979 the railway station had closed, the station building within the site had been

demolished and the railway lines dismantled. However the former goods shed still lay within the centre of the site until recently whilst the dock to the north was beginning to silt up.

- 4.7.4 Between 1979 and 1991 much of the dock had been backfilled and the site was redeveloped as a timber yard with further buildings on the site of the former railway lines. Between 1991 and 2009 the site was further redeveloped with industrial warehouses.

5 ARCHAEOLOGICAL METHODOLOGY

- 5.1 The archaeological monitoring of groundworks was carried out in accordance with a methodology set out in the approved Written Scheme of Investigation³.
- 5.2 Seven geotechnical test pits, (Figure 2) were excavated across the site in order to investigate soil formations, contamination and the potential for archaeology on the site.
- 5.3 The machine excavation removed deposits in spits of 100mm until the natural gravels were reached.
- 5.4 Because of the depth of the excavations and the potential for contamination the trenches were not entered by the attending archaeologist and all recording was carried out from the trench edge. Sections were drawn at 1:20 and relevant photographs were taken as appropriate.
- 5.5 Upon completion of the test pits they were immediately backfilled.

³ PCA 2014 *The Causeway, Maldon, Essex; Written Scheme of Investigation for Archaeological Monitoring of Contamination and Geotechnical Test Pits* PCA Unpublished Report

6 ARCHAEOLOGICAL SEQUENCE

6.1 Trial Pit 1

6.1.1 Trial Pit 1 was located at the north of the site. The earliest deposit encountered was natural gravel [3] at a depth of 0.50m below the current ground surface. Overlying the gravel was a levelling layer of crushed brick and gravel [2] which was in turn sealed by concrete slab [1] which formed the current ground surface.

Context No	Description	Depth	Thickness
1	Concrete Slab	0-0.20m	0.20m
2	Levelling Layer	0.20-0.50m	0.30m
3	Natural Gravels	0.50-1.5m+	1.00m+



Plate 1: TP1, Looking SW

6.2 Trial Pit 2

6.2.1 Trial Pit 2 was excavated in the north-west of the site. It was abandoned at a depth of 0.90m because of the presence of an electric cable. The earliest deposit recorded was alluvial gravel [5] which was in excess of 0.90m thick and was encountered at a depth of 0.60m below the current surface. Sealing the gravel was a levelling layer [4] which was capped by the concrete slab [1].

Context No	Description	Depth	Thickness
1	Concrete Slab	0-0.40m	0.40m
4	Levelling Layer	0.40-0.60m	0.20m
5	Alluvial Gravels	0.60-1.50m+	0.90m+



Plate 2: TP2, Looking SW

6.3 Trial Pit 3

6.3.1 Trial Pit 3 was located at the northern end of the backfilled dock. The earliest deposit recorded was natural gravel [8] at a depth of 1.56m below the current ground surface, with a thickness of over 0.64m. The gravel was directly overlain by the backfill of the dock [7], a mid yellowish brown firmly compacted silty clay with brick fragments and clinker, which was located at 0.42m below ground level and was 1.24m thick. A 0.05m thick layer of chalk [6] overlay the backfill of the dock, which was in turn sealed by the concrete slab [1].

Context No	Description	Depth	Thickness
1	Concrete Slab	0-0.37m	0.37m
6	Chalk Layer	0.37-0.42m	0.05m
7	Dock Backfill	0.42-1.56m	1.24m
8	Natural Gravels	1.56-2.30m+	0.64m+



Plate 3: TP3, Looking SW

6.4 Trial Pit 4

6.4.1 Trial Pit 4 was located along the western edge of the site. The earliest deposit encountered was the natural gravel [12], recorded at a depth of 1.58m below the current ground level and with a thickness in excess of 0.28m. Overlying the gravel at a depth of 1.50m below the current ground surface was a heavily weathered and fragmented peaty layer [11] with a thickness of 0.08m. Sealing the peat was a 1.00m thick layer of alluvial gravels [10] with a depth of 0.50m below ground level. This was in turn overlain by a 0.30m thick levelling layer [9] which was capped by the concrete slab [1].

Context No	Description	Depth	Thickness
1	Concrete Slab	0-0.20m	0.20m
9	Levelling Layer	0.20-0.50m	0.30
10	Alluvial Gravels	0.50-1.50m	1.00m
11	Weathered Peat Layer	1.50-1.58m	0.08m
12	Natural Gravels	1.58-1.80m+	0.28m+



Plate 4: TP4, Looking SE

6.5 Trial Pit 5

6.5.1 Trial Pit 5 was located along the western edge of the backfilled dock. The earliest deposit recorded was the natural gravel [18], recorded at a depth of 2.65m. This was overlain by alluvial gravel [17] located at 1.60m depth which had a thickness of 1.05m. Sealing the alluvial gravel was a 0.10m thick weathered and fragmented layer of peat [16], recorded at a depth of 1.50m. Overlying the peat at a depth of 0.35m was backfill from the dock, with a thickness of 1.15m. This was in turn sealed by a 0.05m thick chalk layer [14], above which was 0.05m thick levelling layer [13] for concrete slab [1].

Context No	Description	Depth	Thickness
1	Concrete	0-0.25	0.25m
13	Levelling Layer	0.25-0.30m	0.05m
14	Chalk Layer	0.30-0.35m	0.05m
15	Dock Backfill	0.35-1.50m	1.15m
16	Weathered Peat Layer	1.50-1.60m	0.10m
17	Alluvial Gravels	1.60-2.65m	1.05m
18	Natural Gravels	2.65m+	-



Plate 5: TP5, Looking SE

6.6 Trial Pit 6

6.6 Trial Pit 6 was located to the east of the site, within the area of the backfilled dock. Natural gravels were not reached as they lay below the maximum depth that the machine arm could reach to. The earliest deposit encountered was the backfill of the dock [21], a dark grey firmly compacted silty clay with brick, clinker and wire, the top of which lay at 1.00m below the ground surface and was over 3m thick. Above the backfill was a 0.60m thick layer of made ground [20] which was sealed by levelling layer [19] which was capped by the concrete slab [1].

Context No	Description	Depth	Thickness
1	Concrete Slab	0-0.20m	0.20m
19	Levelling Layer	0.20-0.40m	0.20m
20	Made Ground	0.40-1.00	0.60m
21	Dock Backfill	1.00-4.00m+	3.00m+



Plate 6: TP6, Looking SE

6.7 Trial Pit 7

6.7.1 Trial Pit 7 was located towards the south of the site. The earliest deposit encountered was the natural gravel [24], recorded at a depth of 1.30m, with a thickness of over 1.40m. Above the gravel, at a depth of 1.25m, was a 0.05m thick layer of heavily weathered and fragmented peat [23]. The peat was sealed by a 0.95m thick layer of alluvial gravel [22] that had a maximum height of 0.30m. Sealing the test pit was the concrete slab [1].

Context No	Description	Depth	Thickness
1	Concrete Slab	0-0.30m	0.30m
22	Alluvial Gravels	0.30-1.25m	0.95m
23	Weathered Peat Layer	1.25-1.30m	0.05m
24	Natural Gravels	1.30-2.70m+	1.40m+



Plate 7: TP7, Looking SE

7 CONCLUSIONS

- 7.1 It was apparent from Trial Pit 1 that within the northern area of the study site any potential archaeological horizon had been removed during the terracing and levelling of the site for the construction of the railway, causing widespread horizontal truncation of any potential archaeological resource.
- 7.2 Trial Pits 3, 5 and 6 also showed truncation of the potential archaeological levels with the construction of the dock. However, whereas Trial Pit 6 showed total removal of any earlier deposits, Trial Pit 5, located on the edge of the dock, showed that the dock edge appeared to rise up gradually, and as a result a band of peat [16] was also recorded which could represent an ancient land surface.
- 7.3 Peat layers were also present within Trial Pits 4 and 7, recorded as [11] and [23] respectively. The presence of the peat is likely to indicate that the study site was periodically occupied by dry land, if only seasonally, with the temporary establishment of vegetation on the marginal land along the water's edge.
- 7.4 That the peat appears both above the alluvial gravels in Trial Pit 5 and below them in Trial Pits 4 and 7 implies that that there has been more than one episode of peat formation. This is typical of foreshores within an intertidal estuary.
- 7.5 No archaeological finds or features were observed during the exercise.

8 ACKNOWLEDGMENTS

Pre-Construct Archaeology Ltd would like to thank Mike Hutchinson of Mills Whipp Projects for commissioning the work, and Zana Benson and the team of Ecologia for their assistance on site.

- 8.1 The author thanks Jennifer Simonson for the figures and Tim Bradley for editing this report.



Contains Ordnance Survey data © Crown copyright and database right 2014

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02/12/15

Figure 1
Site Location
1:2,000,000 & 1:20,000 at A4

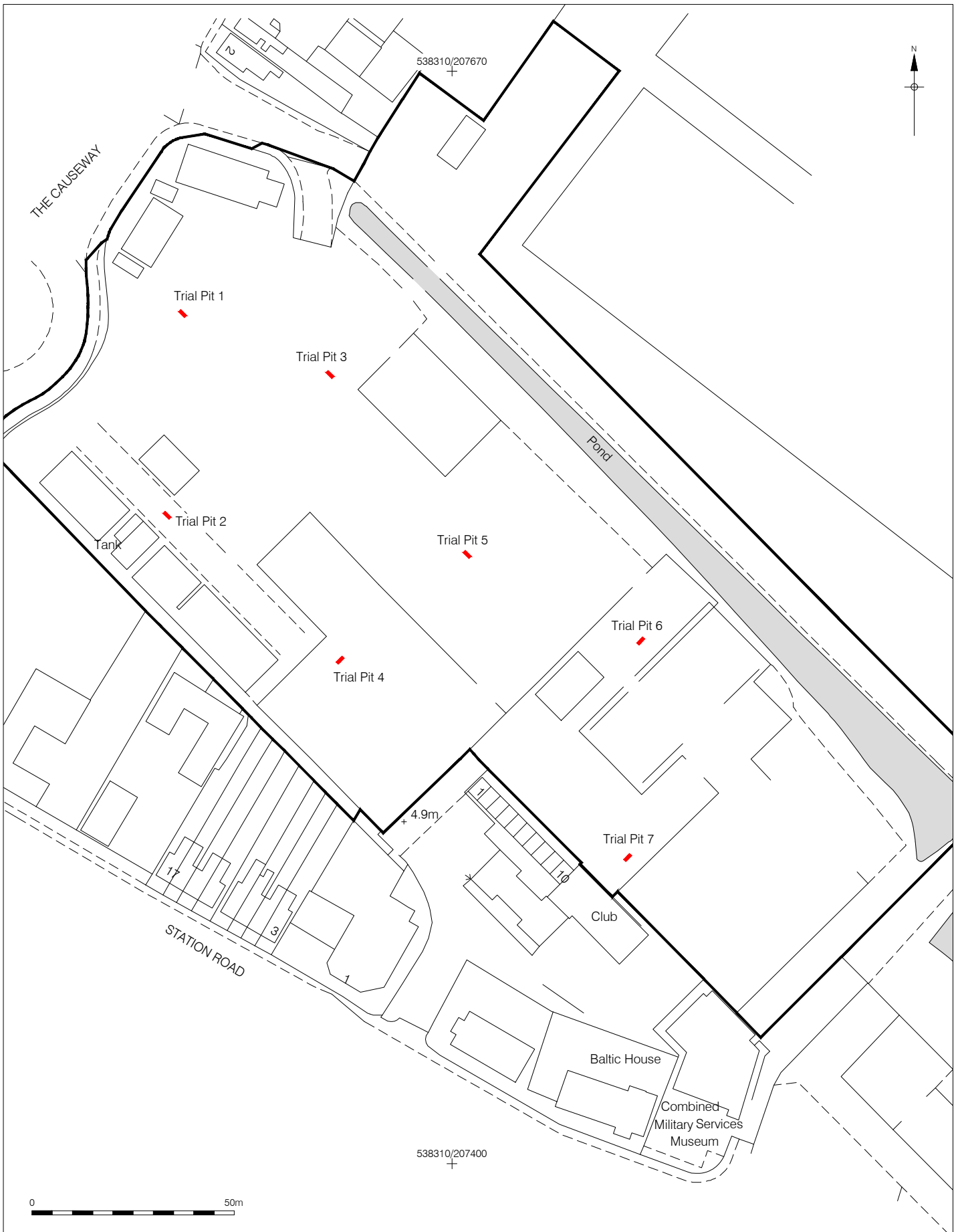
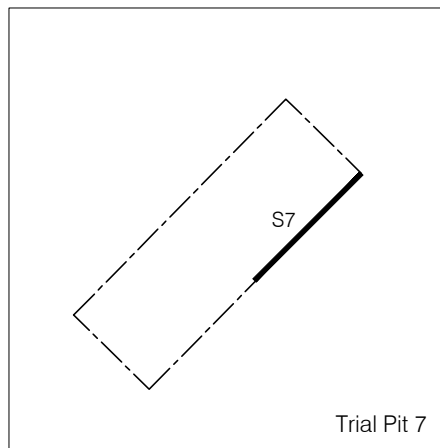
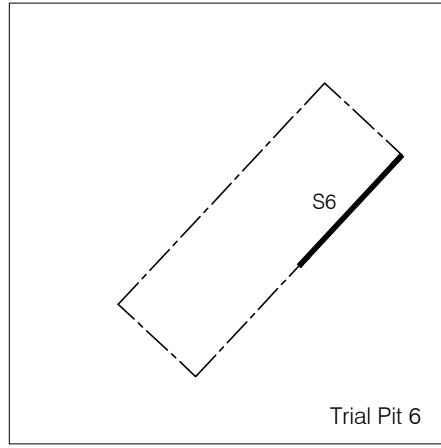
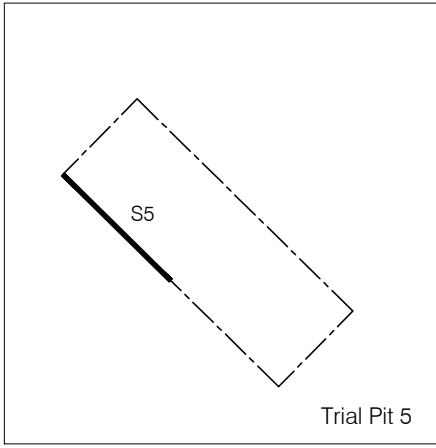
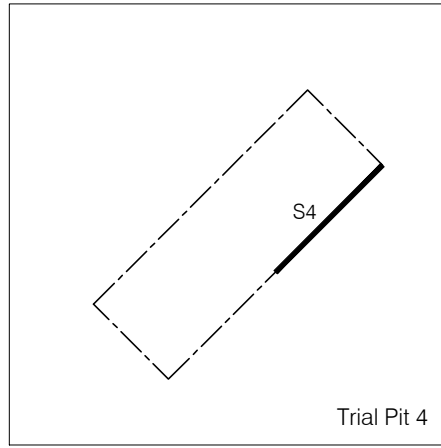
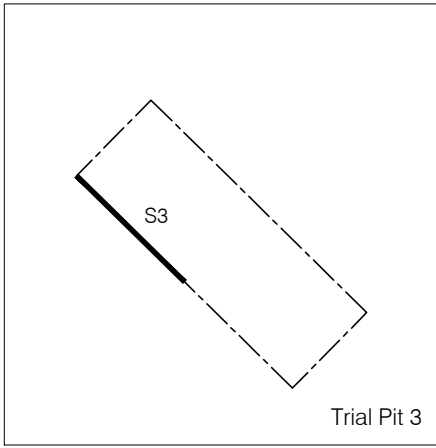
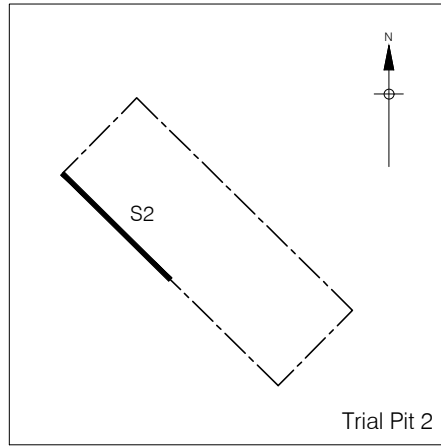
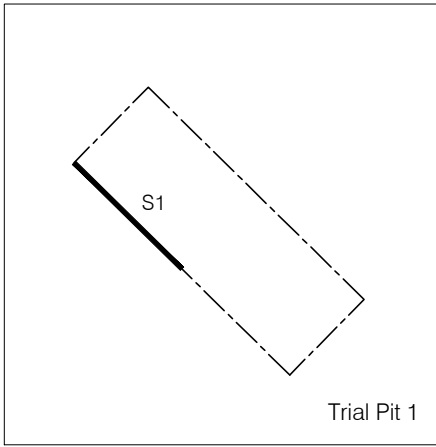
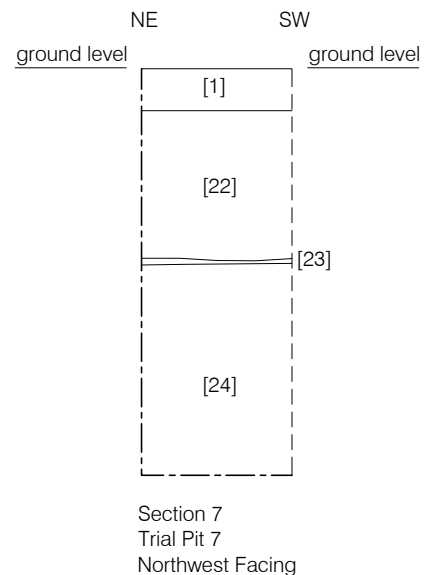
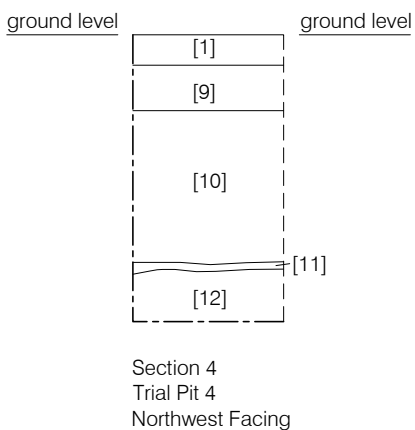
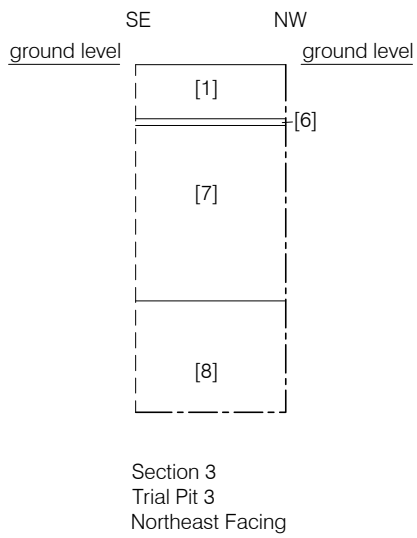
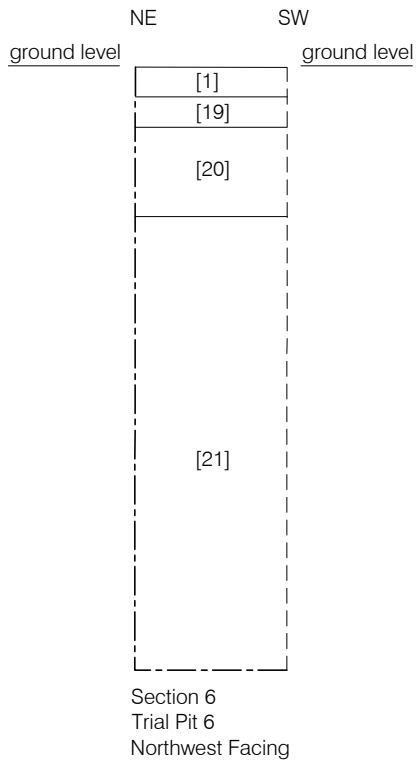
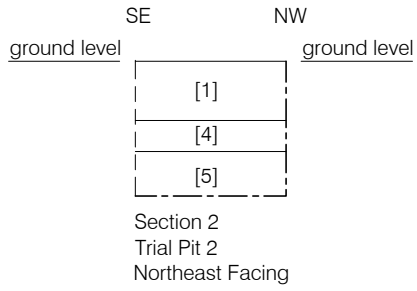
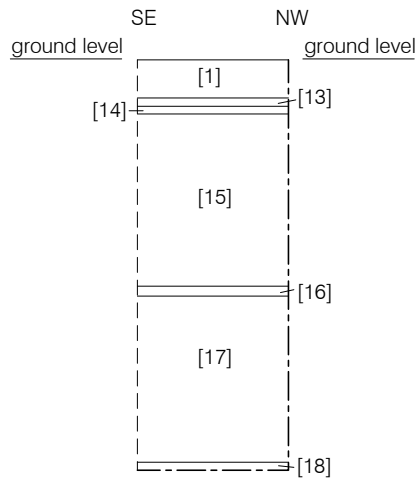
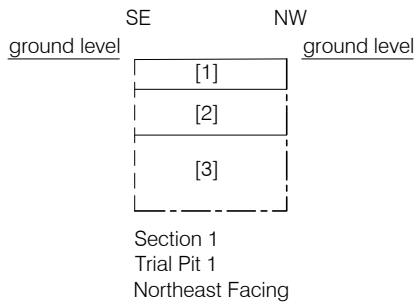


Figure 2
 Trial Pit Locations
 1:1,250 at A4



0 2m
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Figure 3
Trial Pit Plans showing the Section Locations
1:50 at A4



0 2m
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Figure 4
Sections 1 - 7
1:50 at A4

APPENDIX 1: OASIS ARCHAEOLOGICAL REPORT FORM

OASIS ID: preconst1-232098

PROJECT DETAILS

PROJECT NAME	Blackwater Trading Estate, The Causeway, Maldon, Essex:
SHORT DESCRIPTION OF THE PROJECT	An archaeological watching brief was conducted by Pre-Construct Archaeology LTD (PCA) during the excavation of geotechnical trial pits associated with new development at the Blackwater Trading Estate, The Causeway, Maldon, Essex. The works comprised the excavation seven geotechnical trial pits for the new development. The site comprised of former marshland within the Blackwater Estuary and has been subject to phases of reclamation since the late post-medieval period. The cutting of a dock in the north of the site possibly removed archaeological remains in that part of the site, however peat deposits were recorded to the west and the south of the study site.
PROJECT DATES	Start: 25-11-2015 END: 25-11-2015
PREVIOUS/FUTURE WORK	No / Yes
TYPE OF PROJECT	Recording Project
SITE STATUS	None
CURRENT LAND USE	Vacant Land 3 - Despoiled Land (Contaminated Derelict and ?Brownfield? Sites)
MONUMENT TYPE	None None
SIGNIFICANT FINDS	None None
INVESTIGATION TYPE	"Watching Brief"
PROMPT	Planning Condition

PROJECT LOCATION

COUNTRY England

SITE LOCATION Essex Maldon, Maldon Blackwater Trading Estate, The Causeway,
Maldon, Essex

POSTCODE CM9 4LJ

SITE COORDINATES TL 8537 0754 51.735350058774 0.684887503207 51 44 07 N 000
41 05 E POINT

PROJECT CREATORS

NAME OF ORGANISATION Pre-Construct Archaeology Limited

PROJECT BRIEF ORIGINATOR Mills Whipp Projects

PROJECT DESIGN ORIGINATOR Mills Whipp Projects

PROJECT DIRECTOR/MANAGER Tim Bradley

PROJECT SUPERVISOR Guy Seddon

TYPE OF SPONSOR/FUNDING BODY Developer

NAME OF SPONSOR/FUNDING BODY Aquila Holdings

PROJECT ARCHIVES

PHYSICAL ARCHIVE
EXISTS? NO

DIGITAL ARCHIVE
RECIPIENT Local Museum

DIGITAL CONTENTS "Stratigraphic", "Survey"

DIGITAL MEDIA
AVAILABLE "Database", "Images Raster / Digital
Photography", "Spreadsheets", "Text"

PAPER ARCHIVE
RECIPIENT Local Museum

PAPER CONTENTS "Stratigraphic"

PAPER MEDIA
AVAILABLE "Context Sheet", "Plan", "Report", "Section", "Unpublished Text"

PROJECT
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Grey Literature (Unpublished Document/Manuscript)

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