# Colchester Archaeological Trust

**CAT Report 2108**
**issued November 2024**

## Archaeological monitoring and recording at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, RM18 8PB: October 2024

**CAT project ref.: 2024/09g**
**ECC code: EEX60356**

# Archaeological monitoring and recording at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, RM18 8PB: October 2024

## NGR: TQ 69092 76810 (centre)

## Scheduled Monument: 1013943
## Scheduled monument consent: S00246435

## CAT project ref.: 2024/09g
## CAT Report 2108

## Historic England Inspector of Ancient Monuments: Adam Single
## ECC code: EEX60356
## OASIS id: colchest3-528082


## report prepared by Xander Smith with contributions by Dr Matthew Loughton and Laura Pooley

## fieldwork by Xander Smith


## commissioned by Mark Baister, ECC Place Services on behalf of Essex County Council

| | | |
|---|---|---|
| **Prepared by:** | Xander Smith | Senior Site Assistant |
| **Reviewed by:** | Laura Pooley | Post Excavation Manager |
| **Reviewed and approved by:** | Howard Brooks | Senior Associate |
| **Issued:** | 19/11/2024 | |


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## Contents



## List of photographs, tables and figures

Cover: Site shot, view south-east.

# 1 Summary

*Archaeological monitoring and recording was carried out at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, during the excavation of geotechnical survey pits. The Victorian Fort, with its associated railway link and jetty and its rifle range, also includes the foundations of an 16th-century `blockhouse' coastal battery, a late 19th century 'Quick-Firer' battery and a low-level radar tower dating from World War II. Monitoring revealed modern layers and features including buried gravels from an earlier parade ground surface sealing buried topsoil, and a bedding layer for part of the demolished railway.*

# 2 Introduction (Fig 1)

This report presents the results of archaeological monitoring undertaken by the Colchester Archaeological Trust (CAT) at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, on 29th October 2024. The work was commissioned by Mark Baister of Essex County Council Place Services on behalf of Essex County Council and took place during the excavation of geotechnical survey pits aiming to establish the extent of ground contamination.

As the site is a Scheduled Ancient Monument (NHLE 1013943), an application for scheduled monument consent was made and granted (consent no. S00246435), which included a requirement for the archaeological monitoring and recording of all groundworks. This requirement was based on the guidance given in the National Planning Policy Framework (MHCLG 2023).

A Written Scheme of Investigation (WSI) was prepared by CAT (2024a) in response to the archaeological requirement for scheduled monument consent, and agreed with Adam Single, Historic England Inspector of Ancient Monuments (HEIAM), in advance of the groundworks.

In addition to the scheduled monument consent and WSI, all fieldwork and reporting was carried out by CAT will be in accordance with:

- Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2015),
- Professional standards of the Chartered Institute for Archaeologists, including its *Code of Conduct* (CIfA 2022, 2023a&b),
- East of England Standards and Frameworks published by East Anglian Archaeology (Gurney 2003, Medlycott 2011) and the recent review updates on https://researchframeworks.org/eoe/
- Relevant Health & Safety guidelines and requirements (CAT 2024b).

# 3 Archaeological and geoarchaeological background

The following archaeological background primarily includes records from the Essex Historic Environment Record (EHER) held at Essex County Council, County Hall, Chelmsford, Essex (accessible to the public via http://www.heritagegateway.org.uk) and the Scheduled Monument listing (https://historicengland.org.uk/listing/the-list/list-entry/1013943?section=official-list-entry ).

Coalhouse Fort is a Scheduled Monument (NHLE 1013943) built on the marshland of the Thames estuary. The scheduling states that:
*The monument comprises the Victorian Coalhouse Fort at East Tilbury, with its associated railway link and jetty and its rifle range, as well as the foundations of an Henrician `blockhouse' coastal battery, a late 19th century `Quick-Firer' battery and a low-level radar tower dating from World War II. The earliest of this remarkable sequence of Thameside defences is the blockhouse, the construction of which was ordered by Henry VIII in 1539/40. It was built of stone and timber robbed from St Margaret's Chantry nearby. Nothing is visible of the structure itself but the landward ditch survives as a creek, and timber palisading running along the shore in the area may belong to this phase. Beside the blockhouse a jetty was built, perhaps initially to support the blockhouse but later to land coal. After several phases of rebuilding, the jetty served Coalhouse Fort, to which it was joined by a full-gauge railway line which survives almost intact but for the tracks themselves. The first phase of the fort, begun in 1799, was replaced in 1847-*

*55 by a more complex structure which was in turn superseded by the present buildings between 1861-74. This latest fort was added to in the First and Second World Wars and only went out of military use in 1949. Near the waterfront a little distance from the fort are a 19th century battery for Quick-Firer guns and searchlights, a rifle range and a World War II low-level radar tower. The structures form a remarkable group of defensive sites at the strategically important Coalhouse Point.*

The area surrounding the site is known to be rich in multi-period archaeology. Of particular note, to the north of the site at Mucking, an 18-hectare area was intensively excavated between 1965 and 1978 in advance of gravel extraction. The site was renowned in its time as the largest excavation to date in Europe. What it revealed was a dense, multi-period landscape ranging from Neolithic to medieval times, but primarily involving later Bronze and Iron Age, Roman and Saxon settlement; in total, more than 44,000 features were excavated (Clark 1993; Hamerow 1993).

At the London Gateway site to the northeast, Oxford Archaeology undertook a large-scale archaeological investigation in advance of the development of a new deep-sea London Gateway container port. An area of approximately 30 hectares was investigated with large areas extensively excavated (HER 47049). Although there were limited artefacts, two large Romano-British salt-production sites with associated buildings were located at each end of the excavations (OA **18**). Key evidence included channels dug to catch salt water, briquetage trays and supports, evaporation hearths and traces of mounds generally known as 'Red Hills'.

The Geology of Britain viewer (1:50,000 scale[1]) shows the bedrock geology of the site is comprised of Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (chalk). Superficial deposits for the site are comprised of alluvium (unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope). Immediately adjacent to the site is superficial deposits of Beach and Tidal Flat deposits (shingle, sand, silt and clay; may be bedded or chaotic; beach deposits may be in the form of dunes, sheets or banks, and 'Tidal Flat Deposits': commonly silt and clay with sand and gravel layers; possible peat layers; from the tidal zone).

## 4 Aims

Archaeological monitoring was undertaken to excavate and record any archaeological deposits which were exposed by the groundworks.

*Specific aims:*

- Identify any features associated with the historic development and evolution of Coalhouse Fort.
- Record the stratigraphic sequence of deposits affected by the development.

## 5 Results (Figs 2-4)

Eight, roughly circular, geotechnical pits were hand-excavated under the supervision of a CAT archaeologist. These pits measured 0.3m by 0.3m and were 0.5m deep.

Site stratigraphy for each of the test pits is shown in Table 1.

| TP1 | TP2 | TP3 | TP4 | TP5 | TP6 | TP7 | TP8 |
|---|---|---|---|---|---|---|---|
| L4 | L1 | L1 | L1 | L1 | L4 | L1 | L1 |
| F1 | L2 | L2 | L2 | L2 | L5 | L2 | L2 |
| | L3 | L3 | L3 | F2 | L3 | L3 | L3 |

**Table 1** Site stratigraphy.

[1] British Geological Survey – https://geologyviewer.bgs.ac.uk/?

**Test-pits 2, 3, 4, 5, 7 and 8:**
Modern parade ground gravel mixed with grassy topsoil (L1, *c* 0.08-0.16m thick) sealed a layer of modern buried parade ground gravels (L2, c 0.07m – 0.16m thick) above a modern buried topsoil (L3, >0.3m thick). In test-pit 5, L1 and L2 sealed F2, a modern demolition layer/made-ground (F2 >0.25m thick).

**Test-pits 1 and 6:**
In test-pit 1 modern topsoil (L4, c 0.15-0.22m thick) sealed F1, a modern layer of gravel and brick bound by mortar, likely bedding material for the missing section of the extant munitions railway.
In test-pit 6 modern topsoil (L4, c 0.15-0.22m thick) sealed modern made-ground (L5, c 0.1m thick) above L3.

**Photograph 1** Test pit 1 showing F1, view north.


**Photograph 2** Test-pit 3, view north-west.


**Photograph 3** Test-pit 5 showing F2, view north.


**Photograph 4** Test-pit 6, view south-east.

# 6 Finds

## 6.1 Pottery and ceramic building material

*by Dr Matthew Loughton*

Monitoring uncovered a small assemblage of pottery and ceramic building material (henceforth CBM) at seven sherds with a weight of 1.25kg and mean sherd weight of 179g (Table 2).

| Ceramic material | No. | Weight (g) | MSW (g) | EVE |
|---|---|---|---|---|
| Pottery | 2 | 7 | 4 | 0.00 |
| CBM | 5 | 1,245 | 249 | - |
| ***All*** | ***7*** | ***1,252*** | ***179*** | ***0.00*** |

**Table 2** Summary of the pottery and CBM.

**Pottery**

One worn sherd (3g) of Early Medieval sandy ware (fabric F13) dating to c 1000-1225, and one sherd (4g) of Staffordshire-type white earthenwares (fabric 48D) dating to 1800-2000, were recovered from buried topsoil L3.

**Ceramic building material (CBM)**

The assemblage of CBM consisted of five brick fragments including frogged examples which came from the buried topsoil L3 and demolition/made-ground F2.

**Conclusion**

Table 2 summarizes the dating evidence for the feature and layers which contained dateable pottery and CBM. The layers and features are modern and none of the pottery and CBM was retained.

| Context | Description | Medieval pottery | Modern pottery | CBM | Date Approx. |
|---|---|---|---|---|---|
| F2 | Demolition/ made-ground | - | - | BR (FROGGED) | Modern |
| L1 | Parade ground | - | - | BR | Modern |
| L3 | Buried topsoil | F13 | F48D | BR (FROGGED) | Modern |

**Table 3** Approximate dates for the individual contexts.

### 6.2 Iron nails

*by Laura Pooley*

Iron nails were recovered from L2 and L4 (Table 4).

| Context | Finds no. | Description |
|---|---|---|
| L2 | 5 | Iron nail: Complete with small round head, 72.6mm long and 16.2g. |
| L4 | 4 | Iron nail: Complete, rectangular in cross-section, small rectangular head, 75.5mm long, 27.6g. Modern. |

**Table 4** Iron nails listed by context.

## 7 Conclusion

Archaeological monitoring at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex revealed a small number of modern contexts, including buried gravels from an earlier parade ground surface sealing a buried topsoil. The brick-and-mortar layer F1 fits the projected alignment of the extant section of Victorian munitions railway, likely representing the bedding material for the lost section. Demolition/made-ground F2 may represent a levelling layer prior to the construction of the earlier parade ground.

## 8 Acknowledgements

CAT thanks Mark Baister (Essex County Council Place Services) and Essex County Council for commissioning and funding the work. The project was managed by A Wightman and C Lister and carried out by X Smith. Figures were prepared by X Smith and C Hill. The project was monitored for Historic England by Adam Single.

## 9 References

Note: all CAT reports, except for DBAs, are available online in PDF format at http://cat.essex.ac.uk

Brown, N & Glazebrook, J 2000 *Research and Archaeology: A Framework for the Eastern Counties 2. Research agenda and strategy.* East Anglian Archaeology Occasional Paper **8** (EAA **8**)

CAT 2024a *Written Scheme of Investigation for archaeological monitoring and recording of geotechnical investigation pits at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, RM18 8PB.* By E Holloway. Colchester: Colchester Archaeological Trust.

CAT 2024b *Health & Safety Policy.* Colchester: Colchester Archaeological Trust.

CIfA 2022 *Code of Conduct.* CIfA Chartered Institute for Archaeologists; published 2014, revised 2022.

CIfA 2023a *Standard for archaeological monitoring and recording. CIfA Chartered Institute for Archaeologists.*

CIfA 2023b *Universal guidance for archaeological monitoring and recording*. CIfA Chartered Institute for Archaeologists.

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| | | Report 20 |
| Cotter, J.P. | 2000 | *Colchester Archaeological Report 7: Post-Roman pottery from excavations in Colchester, 1971-85. Colchester: Colchester Archaeological Trust Ltd.* |
| Gurney, D | 2003 | *Standards for field archaeology in the East of England.* East Anglian Archaeology Occasional Papers 14 (EAA 14). |
| Hamerow, H | 1993 | *Excavations at Mucking: Volume 2: The Anglo-Saxon settlement.* English Heritage Archaeological Report 21 |
| Historic England | 2015 | *Management of Research Projects in the Historic Environment (MoRPHE).* |
| MHCLG | 2023 | *National Planning Policy Framework.* Ministry of Housing, Communities and Local Government. |
| Medlycott, M | 2011 | *Research and archaeology revisited: A revised framework for the East of England*. East Anglian Archaeology Occasional Papers **24** (EAA **24**). |
| OA **18** | 2012 | *London Gateway: Iron Age and Roman salt making in the Thames Estuary. Excavation at Stanford Wharf Nature Reserve, Essex*. Oxford Archaeology Monograph **18**. By E Biddulph, S Foreman, Stafford, Stansbie and Nicholson |


## 10 Abbreviations and glossary

| | |
|---|---|
| Anglo-Saxon | period from *c* AD 500 – 1066 |
| Bronze Age | period from *c* 2500 – 700 BC |
| CAT | Colchester Archaeological Trust |
| CHER | Colchester Historic Environment Record |
| CIfA | Chartered Institute for Archaeologists |
| context | specific location of finds on an archaeological site |
| feature (F) | an identifiable thing like a pit, a wall, a drain: can contain 'contexts' |
| Iron Age | period from 700 BC to Roman invasion of AD 43 |
| layer (L) | distinct or distinguishable deposit (layer) of material |
| modern | period from *c* AD 1800 to the present |
| medieval | period from AD 1066 to *c* 1500 |
| natural | geological deposit undisturbed by human activity |
| Neolithic | period from *c* 4000 – 2500 BC |
| NGR | National Grid Reference |
| OASIS | **O**nline **A**cces**S** to the **I**ndex of Archaeological Investigation**S**, http://oasis.ac.uk/pages/wiki/Main |
| post-medieval | from c AD 1500 to c 1800 |
| section | (abbreviation sx or Sx) vertical slice through feature/s or layer/s |
| wsi | written scheme of investigation |

## 11 Contents of archive

**Finds:** not retained
**Digital record**
CAT Report 2108
Scheduled Monument consent
CAT WSI
Digital photographs
Site data (including scans of original plans/sections)
Survey data

## 12 Archive deposition

The archive is currently held by the Colchester Archaeological Trust at Roman Circus House, Roman Circus Walk, Colchester, Essex CO2 7GZ, but will be permanently deposited with the Archaeology Data Service.

**Distribution list**
Mark Baister, Essex County Council Place Services
Adam Single, Historic England Inspector of Ancient Monuments
Essex Historic Environment Record

## Appendix 1 Context list

| Context | Finds no. | Identification | Description | Date |
|---|---|---|---|---|
| L1 | 6 | Parade ground | Parade ground gravel mixed with grassy topsoil; firm moist dark grey/brown silt and inclusions of: gravel 10%. Seals L2. | Modern |
| L2 | 5 | Buried parade ground | Parade ground gravels; firm moist dark yellow/brown clay silt with brick flecks and inclusions of: gravel 10%. Sealed by L1, seals L3 and F2. | Modern |
| L3 | 1, 2, 7 | Buried topsoil | Hard moist dark grey/brown clay with charcoal flecks, brick flecks, tile flecks and inclusions of: stone 1%. Sealed by L2 and L5. | Modern |
| L4 | 4 | Topsoil | Soft moist dark grey/brown silt with brick flecks and inclusions of: stone 1%. Seals L5 and F1. | Modern |
| L5 | - | Made ground | Friable moist medium grey/brown sandy silt and inclusions of: stone 2%. Sealed by L4, seals L3. | Modern |
| | | | | |
| F1 | - | Bedding layer | Test-pit 1, sealed by L4.<br>Layer of gravel and brick bound by mortar, likely bedding material for the missing section of the extant munitions railway. | Modern |
| F2 | 3 | Demolition/ made-ground | Test-pit 5, sealed by L2.<br>Firm moist medium yellow/grey /brown clayey silt with brick flecks and inclusions of: gravel 2%, stone 3%. | Modern |

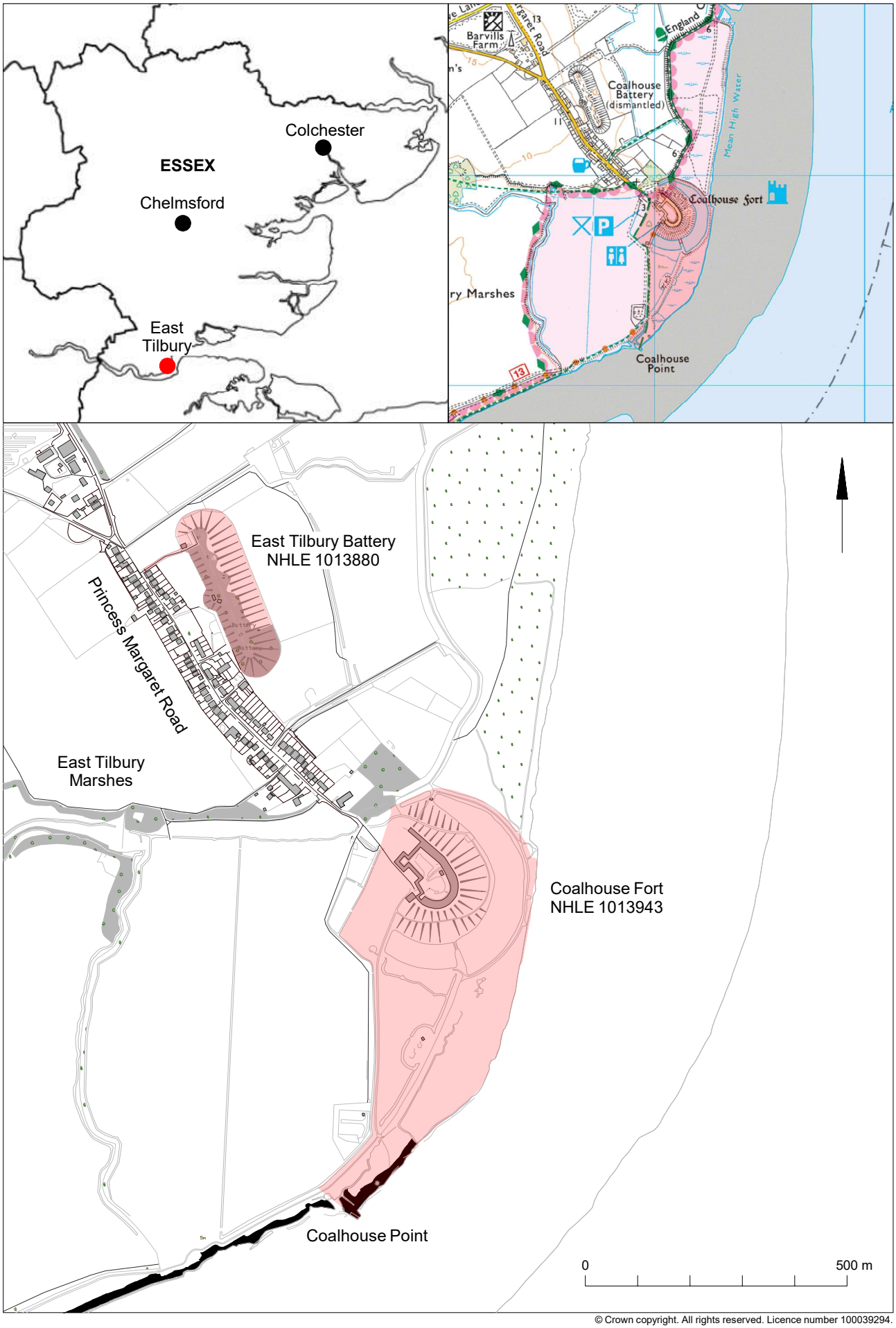





Fig 1 Site location.

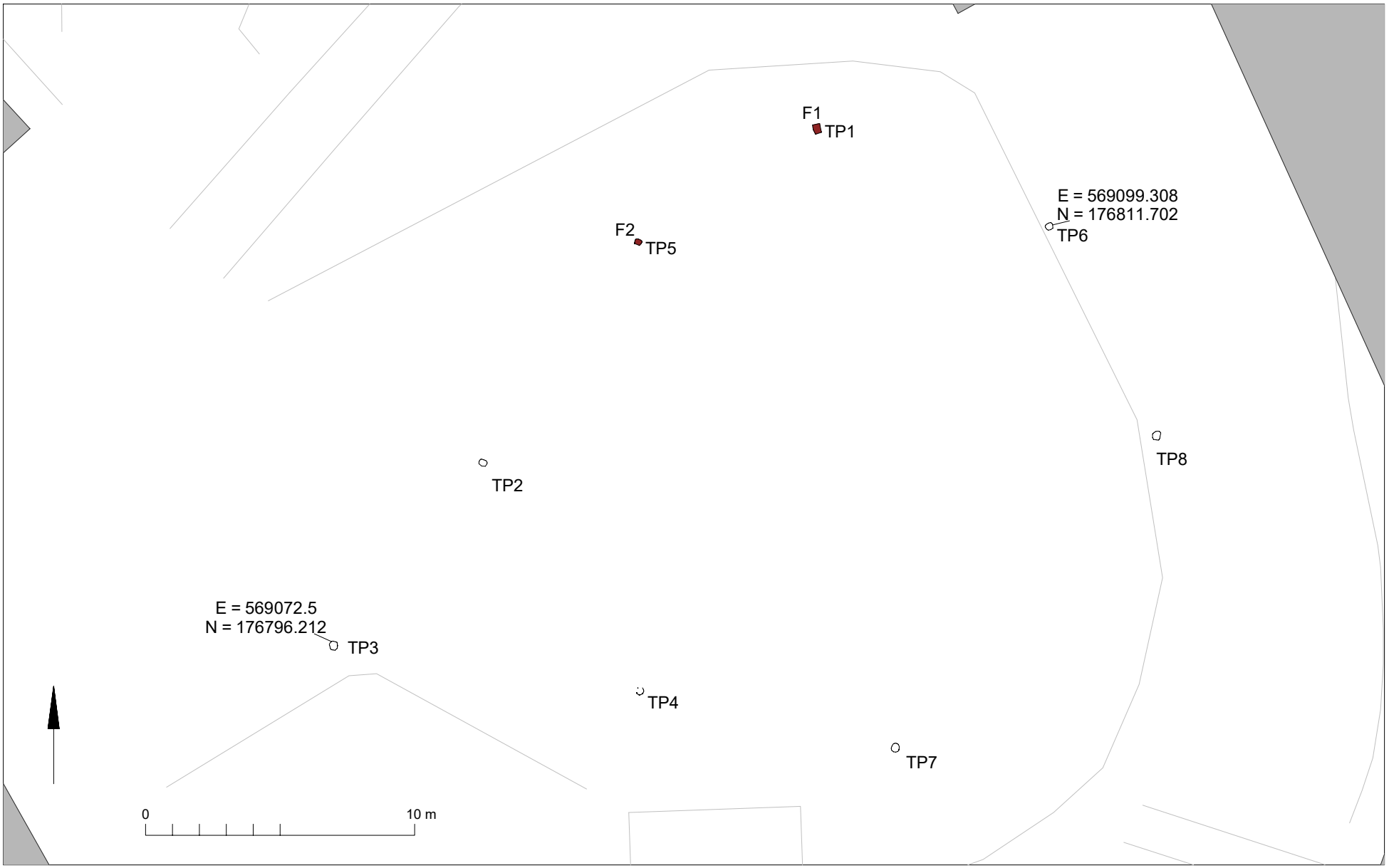





Fig 2 Results.

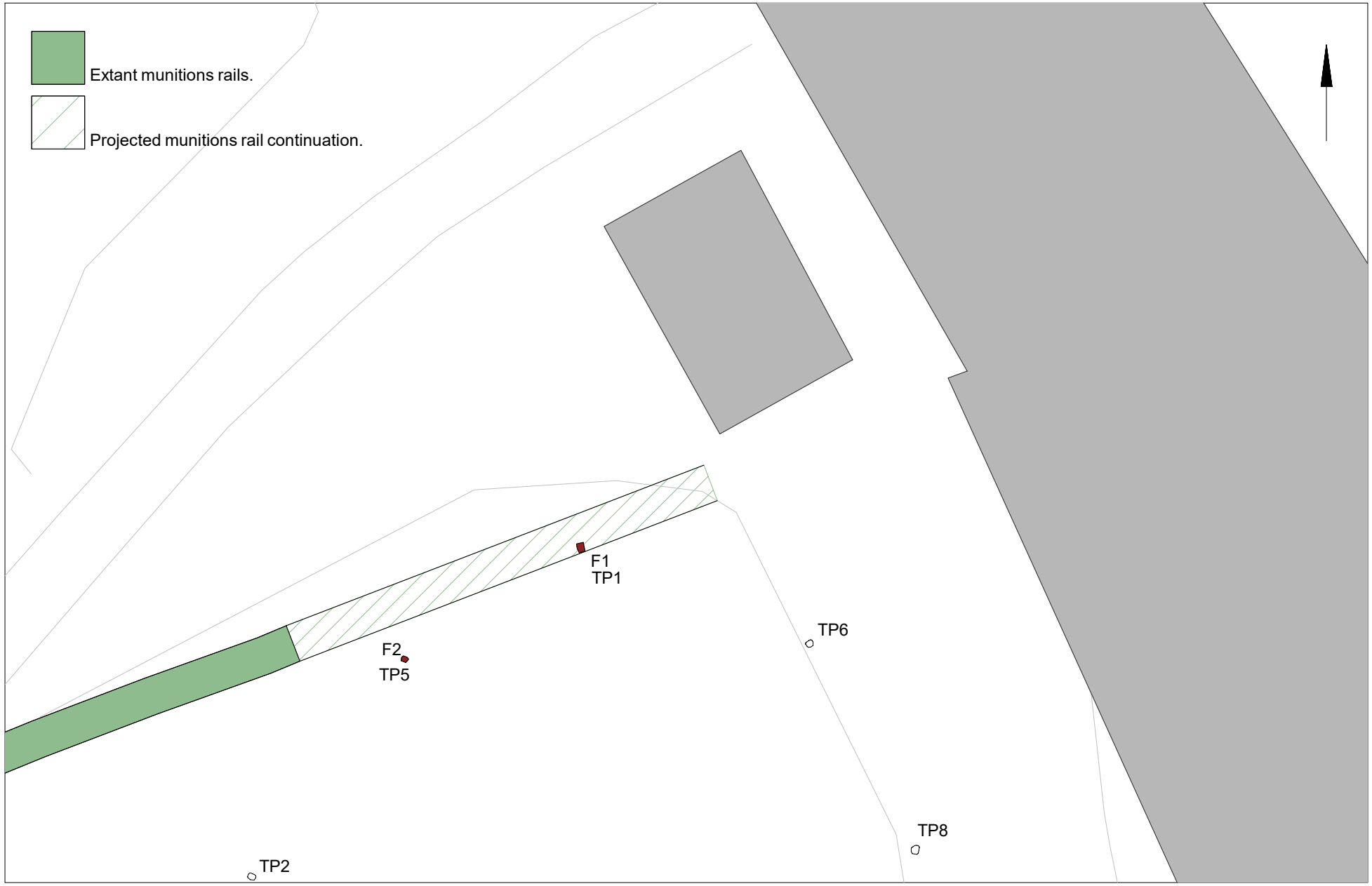





Fig 3 Projected continuation of extant munitions rails.

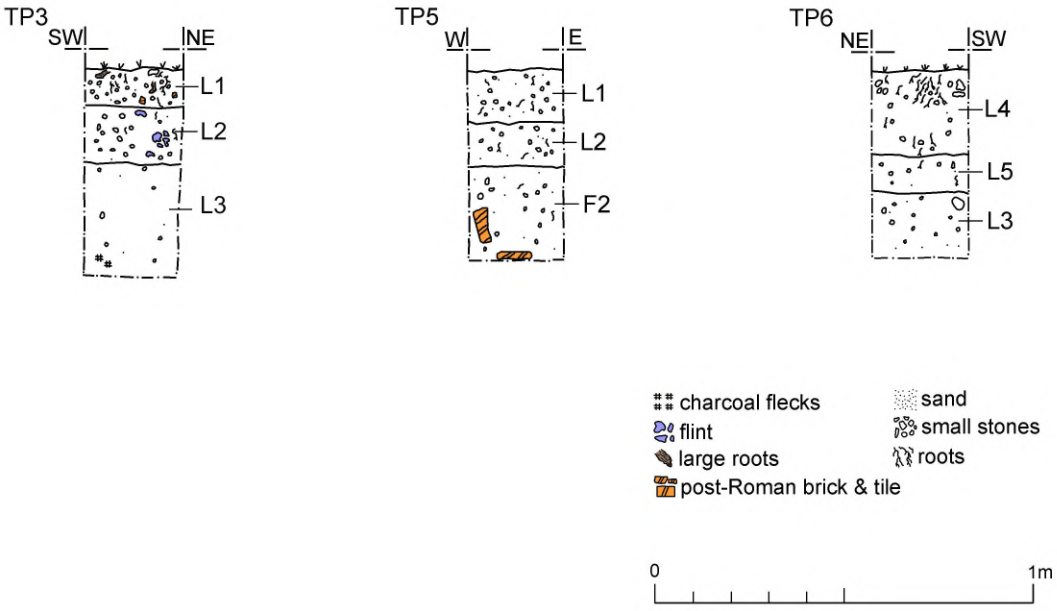
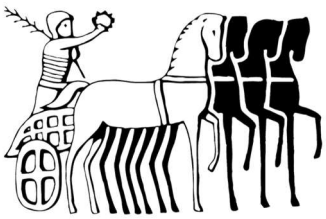



Fig 4 Representative and feature sections.

# Colchester Archaeological Trust



## Written Scheme of Investigation for archaeological monitoring and recording of geotechnical investigation pits at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, RM18 8PB

**September 2024**

**CAT project ref.: 2024/09g**
**EHER event code: tbc**

# Written Scheme of Investigation for archaeological monitoring and recording of geotechnical investigation pits at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, RM18 8PB

## September 2024

## NGR: TQ 69092 76810 (centre)

## Scheduled Monument: 1013943
## Scheduled monument consent no.: S00246435
**Historic England Inspector of Ancient Monuments: Adam Single**

## CAT project ref.: 2024/09g

## EHER event code: tbc
## OASIS id: colchest3-528082

## WSI by: Emma Holloway
## Figure prepared by: Chris Lister

## Commissioned by: Mark Baister (ECC Place Services)
## Client: Essex County Council

| | | |
|---|---|---|
| Prepared by: | Emma Holloway | Project Officer (Post-excavation & Illustration) |
| Reviewed and approved by: | Chris Lister | Director, Business Operations |
| Issued: | 18/09/2024 | |

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## Site location and description

Coalhouse Fort is a Scheduled Ancient Monument (NHLE 1013943) located on the northern bank of the River Thames at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex (Fig 1). The site is centred at National Grid Reference (NGR) TQ 69092 76810.

## Proposed work

Having been closed for some time, surveys are being undertaken to identify work needed to restore the fort to become a visitor attraction. Investigations to establish the extent of ground contamination are required and will comprise eight test pits.

## Geological background

The Geology of Britain viewer (1:50,000 scale[1]) shows the bedrock geology of the site is comprised of Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (chalk). Superficial deposits for the site are comprised of alluvium (unconsolidated detrital material deposited by a river, stream or other body of running water as a sorted or semi-sorted sediment in the bed of the stream or on its floodplain or delta, or as a cone or fan at the base of a mountain slope). Immediately adjacent to the site is superficial deposits of Beach and Tidal Flat deposits (shingle, sand, silt and clay; may be bedded or chaotic; beach deposits may be in the form of dunes, sheets or banks, and 'Tidal Flat Deposits': commonly silt and clay with sand and gravel layers; possible peat layers; from the tidal zone).

## Archaeological background

Coalhouse Fort is a Scheduled Monument (NHLE 1013943) built on the marshland of the Thames estuary. The scheduling states that:
*The monument comprises the Victorian Coalhouse Fort at East Tilbury, with its associated railway link and jetty and its rifle range, as well as the foundations of an Henrician `blockhouse' coastal battery, a late 19th century `Quick-Firer' battery and a low-level radar tower dating from World War II. The earliest of this remarkable sequence of Thameside defences is the blockhouse, the construction of which was ordered by Henry VIII in 1539/40. It was built of stone and timber robbed from St Margaret's Chantry nearby. Nothing is visible of the structure itself but the landward ditch survives as a creek, and timber palisading running along the shore in the area may belong to this phase. Beside the blockhouse a jetty was built, perhaps initially to support the blockhouse but later to land coal. After several phases of rebuilding, the jetty served Coalhouse Fort, to which it was joined by a full-gauge railway line which survives almost intact but for the tracks themselves. The first phase of the fort, begun in 1799, was replaced in 1847-55 by a more complex structure which was in turn superseded by the present buildings between 1861-74. This latest fort was added to in the First and Second World Wars and only went out of military use in 1949. Near the waterfront a little distance from the fort are a 19th century battery for Quick-Firer guns and searchlights, a rifle range and a World War II low-level radar tower. The structures form a remarkable group of defensive sites at the strategically important Coalhouse Point* (https://historicengland.org.uk/listing/the-list/list-entry/1013943?section=official-list-entry ).

The area surrounding the site is known to be rich in multi-period archaeology. Of particular note to the north of the site at Mucking, an 18-hectare area was intensively excavated between 1965 and 1978 in advance of gravel extraction. The site was renowned in its time as the largest excavation to date in Europe. What it revealed was a dense, multi-period landscape palimpsest ranging from Neolithic to Medieval times, but primarily involving later Bronze and Iron Age, Roman and Saxon settlement; in total, more than 44,000 features were excavated (Clark 1993 & Hamerow 1993).

At the London Gateway site to the northeast, Oxford Archaeology undertook a large-scale archaeological investigation in advance of the development of a new deep-sea London

[1] British Geological Survey – https://geologyviewer.bgs.ac.uk/?

Gateway container port. An area of approximately 30 hectares was investigated with large areas extensively excavated (HER 47049). Although there were limited artefacts, two large Romano-British salt-production sites with associated buildings were located at each end of the excavations (OA **18**). Key evidence included channels dug to catch salt water, briquetage trays and supports, evaporation hearths and traces of mounds generally known as 'Red Hills'.

## Project background

In response to consultation with Adam Single, Inspector of Ancient Monuments for Historic England (HEIAM) it was advised that as the site lies within a Scheduled Ancient Monument (NHLE no. 1013943), and therefore an area highlighted as having a high potential for archaeological remains, scheduled monument consent for the works would require archaeological monitoring of the geotechnical pits (consent no. tbc). The recommendation for the archaeological work is based on the guidance given in the National Planning Policy Framework (MHCLG 2023).

## Requirement for work (Figs 1-2)

The required archaeological work will consist of archaeological monitoring and recording.

Specifically,
Monitoring of eight test-pits to be dug, each measuring 0.5m by 0.3m excavated to between 0.5-1.2m deep (see Fig 2).

The archaeological monitoring will preserve, by record, any archaeological deposits uncovered during the groundworks. Time will be allowed before further work or machine stripping in the area to plan, excavate and record any features exposed.

Archaeological work will determine the presence or absence, the extent, date and character and significance of any archaeological remains that may be present and ensure their preservation by record prior to damage or destruction.

*Specific aims:*

- Identify any features associated with the 19th century fort.
- Look for any surviving evidence of earlier fortifications made by Henry VIII.
- Record the stratigraphic sequence of deposits affected by the development.

## General methodology

All work carried out by CAT will be in accordance with:

- Professional standards of the Chartered Institute for Archaeologists, including its *Code of Conduct* (CIfA 2020, 2022 & 2023a-b)
- East of England Standards and Frameworks published by East Anglian Archaeology (Gurney 2003, Medlycott 2011) and the recent review updates on https://researchframeworks.org/eoe/
- Relevant Health & Safety guidelines and requirements (CAT 2024)
- Scheduled Monument consent documents (no. tbc).

Professional CAT field archaeologists will undertake all specified archaeological work, for which they will be suitably experienced and qualified.

Notification of the supervisor/project manager's name and the start date for the project will be provided to the HEIAM one week before start of work.

Unless it is the responsibility of other site contractors, CAT will study mains service locations and avoid damage to these.

At the start of the project (when the WSI is written) an OASIS online record http://ads.ahds.ac.uk/project/oasis/ will be initiated and key fields completed (Activity type,

Location and Reviewers/Admin areas). At the end of the project all parts of the OASIS online form will be completed for submission to the CHER. This will include an uploaded .PDF version of the entire report.

A project or site code will be sought from the Essex County Council Historic Environment Advisor (ECCHEA) and/or the curating museum, as appropriate to the project. This code will be used to identify the project archive when it is deposited at the curating museum.

## Staffing

The number of field staff for this project is estimated as follows: One CAT officer for the duration of the groundworks.

## Monitoring methodology

There will be sufficient on-site attendance by CAT staff to maintain a watch on all contractors' groundworks to record, excavate or sample (as necessary) any archaeological features or deposits.

All topsoil removal and ground reduction will be carried out under the supervision and to the satisfaction of CAT staff. Where necessary, areas will be cleaned by hand to ensure the visibility of archaeological deposits.

If any features or deposits are uncovered, time will be allowed for these features to be excavated by hand, planned and recorded. This includes a 50% sample of discrete features (pits, etc), at least 10% of linear features (ditches, etc) in 1m wide sections, and 100% of complex structures/features. Complex archaeological structures such as walls, kilns, ovens or burials will be carefully cleaned, planned and fully recorded.

Fast hand-excavation techniques involving (for instance) picks, forks and mattocks will not be used on complex stratigraphy.

A metal detector will be used to examine spoil heaps, and the finds recovered.

Individual records of excavated contexts, layers, features or deposits will be entered on proforma record sheets. Registers will be compiled of finds, small finds and soil samples.

All features and layers or other significant deposits will be planned, and their profiles or sections recorded. The normal scale will be site plans at 1:20 and sections at 1:10, unless circumstances indicate that other scales would be appropriate.

## Site surveying

The evaluation trenches and any features will be surveyed by Total Station or GPS, unless the particulars of the features indicate that manual planning techniques should be employed. Normal scale for archaeological site plans and sections is 1:20 and 1:10 respectively, unless circumstances indicate that other scales would be more appropriate.

The site grid will be tied into the National Grid. Corners of excavation areas will be located by NGR coordinates.

## Environmental sampling policy

The number and range of samples collected will be adequate to determine the potential of the site, with particular focus on palaeoenvironmental remains including both biological remains (e.g. plants, small vertebrates) and small sized artefacts (e.g. smithing debris). Samples will be collected for potential micromorphological and other pedological sedimentological analysis.

Environmental bulk samples will be at least 40 litres in size (assuming context is large enough).

Sampling strategies will address questions of:

- The range of preservation types (charred, mineral-replaced, waterlogged), and their quality.
- Concentrations of macro-remains.
- Differences in remains from undated and dated features.
- Variation between different feature types and areas of site.

Environmental samples will be processed by trained CAT staff and the flots will be analysed and reported by CAT Senior site/post-excavation assistant Bronagh Rae-Quinn or sent to external specialists Val Fryer / Lisa Gray.

Should any complex, or otherwise outstanding deposits be encountered, BRQ, VF or LG will be asked onto site to advise. Waterlogged 'organic' features will always be sampled. In all cases, the advice of BRQ/VF/LG and/or the Historic England Regional Advisor in Archaeological Science (East of England) on sampling strategies for complex or waterlogged deposits will be followed, including the taking of monolith samples. Where necessary, BRQ, VF or an appropriate specialist will be invited to site to advise on sampling strategies.

## Human remains

CAT follows the policy of leaving human remains *in situ* unless there is a clear indication that the remains are in danger of being compromised as a result of their exposure or unless advised to do so by the project osteologist or the HEIAM.

If circumstances indicated it were prudent or necessary to remove remains from the site during the monitoring, the following criteria would be applied; if it is clear from their position, context, depth, or other factors that the remains are ancient, then normal procedure is to apply to the Department of Justice for a licence to remove them and seek advice from the project osteologist.

Following Historic England guidance (2018) if the human remains are not to be lifted, the project osteologist should be available to record the human remain *in situ* (i.e. a site visit). Conditions laid down by the DoJ license will be followed. If it seems that the remains are not ancient, then the coroner, the client, and the HEIM will be informed, and any advice and/or instruction from the coroner will be followed.

## Photographic record

Will include both general and feature-specific photographs, the latter with scale and north arrow. A photo register giving context number, details, and direction of shot will be prepared on site, and included in site archive. Digital site photographs will be taken and archived as per Historic England guidelines (2015a).

## Finds

All significant finds will be retained.

All finds, where appropriate, will be washed and marked with site code and context number.

Most of our finds reports are written internally by CAT staff under the supervision and direction Adam Wightman (Director of Archaeology), Howard Brooks (Senior Associate) and Laura Pooley (Post-excavation Manager). This includes specialist subjects such as:

ceramic finds (pottery and ceramic building material): Matthew Loughton
animal bones: Alec Wade (or Adam Wightman/Pip Parmenter - small groups only)
small finds, metalwork, coins, etc: Laura Pooley

non-ceramic bulk finds: Laura Pooley
flint: Adam Wightman (or Tabitha Gulliver Lawrence)
environmental processing and assessment: Bronagh Quinn
osteology: (human remains): Megan Beale

or to outside specialists:

animal and human bone: Julie Curl (*Sylvanus*)
environmental assessment and analysis: Val Fryer / Lisa Gray
archaeometallurgy: David Dungworth
radiocarbon dating: SUERC Radiocarbon Dating Laboratory, Glasgow
conservation/x-ray: Laura Ratcliffe (LR Conservation) / Norfolk Museums Service, Conservation and Design Services

Other specialists whose opinion can be sought on large or complex groups include:

Historic England Regional Adviser in Archaeological Science (East of England).

All finds of potential treasure will be removed to a safe place, and the coroner informed immediately, in accordance with the rules of the Treasure Act 1996. The definition of treasure is given in pages 3-5 of the Code of Practice of the above act. This refers primarily to gold or silver objects.

Requirements for conservation and storage of finds will be agreed with the appropriate museum prior to the start of work and confirmed to the HEIAM.

A contingency will be made in the budget for scientific assessment/analysis if suitable deposits are identified. This can include soil micromorphological and geochemical analysis of floors and dark earth deposits and/or absolute dating (such as archaeomagnetic and radiocarbon). The Historic England Regional Science Advisor will be consulted for advice.

## Post-excavation assessment

An updated post-excavation assessment will be submitted within 2 months or at an alternatively agreed time with the HEIAM.

Where archaeological results do not warrant a post-excavation assessment then agreement will be sought from the HEIAM to proceed straight to grey literature / publication.

## Results

Notification will be given to the HEIAM when the fieldwork has been completed.

An appropriate archive will be prepared to minimum acceptable standards outlined in *Management of Research Projects in the Historic Environment* (Historic England 2015b).

The report will be submitted within 6 months of the end of fieldwork, with a copy supplied to the Historic Environment Advisor as a single PDF.

The report will contain:

- Location plan of trenches in relation to the proposed development. At least two corners of each excavated area will be given a 10-figure grid reference.
- Section/s drawings showing depth of deposits from present ground level with Ordnance Datum, vertical and horizontal scale.
- Archaeological methodology and detailed results including a suitable conclusion and discussion.
- Appropriate discussion and results section assessing the site in relation to the Regional Research Frameworks (Brown and Glazebrook 2000, Medlycott 2011. https://researchframeworks.org/eoe/).
- All specialist reports or assessments
- A concise non-technical summary of the project results.

An OASIS summary sheet shall be completed at the end of the project and supplied to the HEIAM. This will be completed in digital form with a paper copy included with the archive. A copy (with site plan) will also be emailed to the Hon. Editor of the Essex Archaeology and History Journal for inclusion in the annual round-up of projects (paul.gilman@me.com).

Publication of the results at least a summary level (i.e. round-up in *Essex Archaeology & History*) shall be undertaken in the year following the archaeological fieldwork. An allowance will be made in the project costs for the report to be published in an adequately peer reviewed journal or monograph series.

A PDF copy of the full report will be uploaded by CAT to the OASIS website and the Colchester Archaeological Trust's Online Report Library (http://cat.essex.ac.uk/), both of which are publicly accessible.

## Archive deposition

The requirements for archive storage shall be agreed with the Curating museum.

If finds are retained from the site, the full finds archive will be deposited with Thurrock Museum unless otherwise agreed in advance. The full digital archive will be deposited with Archaeology Data Service (ADS).

The requirements for archive storage will be agreed with the curating museum.

If the finds are to remain with the landowner, there will be provision made for additional recording (e.g. photography, illustration and analysis) that will form part of the digital archive.

The digital archive resulting from the work will be deposited with the Archaeology Data Service (www.archaeologydataservice.ac.uk) to safeguard the long-term curation of the digital records. The HEIAM will be notified when the digital archive has been deposited. Prior to deposition CAT's data management plan (based on the official guidelines from the Digital Curation Centre [DCC 2013]) will ensure the integrity of the digital archive. A summary of the contents of the archives shall be supplied to the HEIAM at the time of their deposition.

The HEIAM will be notified when the digital archive has been deposited.

## Monitoring

The HEIAM will be responsible for monitoring progress and standards throughout the project, and will be kept regularly informed during fieldwork, post-excavation and publication stages.

Notification of the start of work will be given to the HEIAM one week in advance of its commencement.

Any variations in this WSI will be agreed with the HEIAM prior to them being carried out.

The HEIAM will be notified when the fieldwork is complete.

The involvement of the HEIAM shall be acknowledged in any report or publication generated by this project.

## Public outreach

As part of CAT's public outreach programme, CAT is committed to engaging our local community with their archaeological resource. Among other activities, CAT regularly invites volunteers to engage in finds processing tasks at our office, such as washing, marking, sorting and packing bulk archaeological finds from commercial archaeological projects. Our volunteer programme is not designed to replace the work of paid archaeologists but to

complement it, and to provide greater public benefit by means of community engagement and participation.

CAT volunteers are fully trained in all tasks they are engaged in and are fully supervised by a CAT employee at all times. Finds processing volunteers are managed and supervised by a Junior Project Officer, whose role is to ensure that all volunteer processing is carried out to the highest possible standard and within professional guidelines. This is overseen by the Post-Excavation Manager and CAT Directors.

CAT will never use volunteers in place of employees when funding is agreed for the latter, or if doing so would disadvantageously affect the timetable of works agreed between CAT and our clients.

CAT's liability insurance policies cover the activities of volunteers and liability towards them. All activities are carried out according to CAT's 'Volunteer and work experience policy' and 'Outreach, public relations and publicity policy'.

## Events, activities and social media

In addition, the CAT website (www.catuk.org) and social media sites are updated regularly with information on our events and activities, with copies of our archaeological reports freely available at http://cat.essex.ac.uk/. Staff regularly give talks/lectures to groups, societies and schools, information on which (including any fees) is available by contacting the office on 01206 501785. CAT also works in partnership with both the Colchester Archaeological Group and Young Archaeologists Club providing venues for their meetings, advice and assistance.

## References

Note: all CAT reports, except for DBAs, are available online in PDF format at http://cat.essex.ac.uk


| | | |
|---|---|---|
| Brown, N & Glazebrook, J | 2000 | *Research and Archaeology: A Framework for the Eastern Counties 2. Research agenda and strategy.* East Anglian Archaeology Occasional Paper **8** (EAA **8**) |
| CAT | 2024 | *Health & Safety Policy* |
| CIfA | 2020 | *Standard and guidance for the collection, documentation, conservation and research of archaeological materials.* Published 2014, revised October 2020 |
| CIfA | 2022 | *Code of Conduct.* Published 2014, revised October 2022 |
| CIfA | 2023a | *Standard for archaeological monitoring and recording* |
| CIfA | 2023b | *Universal guidance for archaeological monitoring and recording* |
| Clark, A | 1993 | *Excavations at Mucking: Volume 1: the site atlas.* English Heritage Archaeological Report 20 |
| Gurney, D | 2003 | *Standards for field archaeology in the East of England.* East Anglian Archaeology Occasional Papers **14** (EAA **14**). |
| Hamerow, H | 1993 | *Excavations at Mucking: Volume 2: The Anglo-Saxon settlement.* English Heritage Archaeological Report 21 |
| Historic England | 2015a | *Digital Image capture and File Storage: Guidelines for best practice,* by S Cole & P Backhouse |
| Historic England | 2015b | *Management of Research Projects in the Historic Environment (MoRPHE)* |
| Historic England | 2018 | *The Role of the Human Osteologist in an Archaeological Fieldwork Project*. By S Mays, M Brickley and J Sidell |
| Medlycott, M | 2011 | *Research and archaeology revisited: A revised framework for the East of England*. East Anglian Archaeology Occasional Papers **24** (EAA **24**) |
| MHCLG | 2023 | *National Planning Policy Framework.* Ministry of Housing, Communities and Local Government. |
| OA **18** | 2012 | *London Gateway: Iron Age and Roman salt making in the Thames Estuary. Excavation at Stanford Wharf Nature Reserve, Essex.* Oxford Archaeology Monograph **18**. By E Biddulph, S Foreman, Stafford, Stansbie and Nicholson |

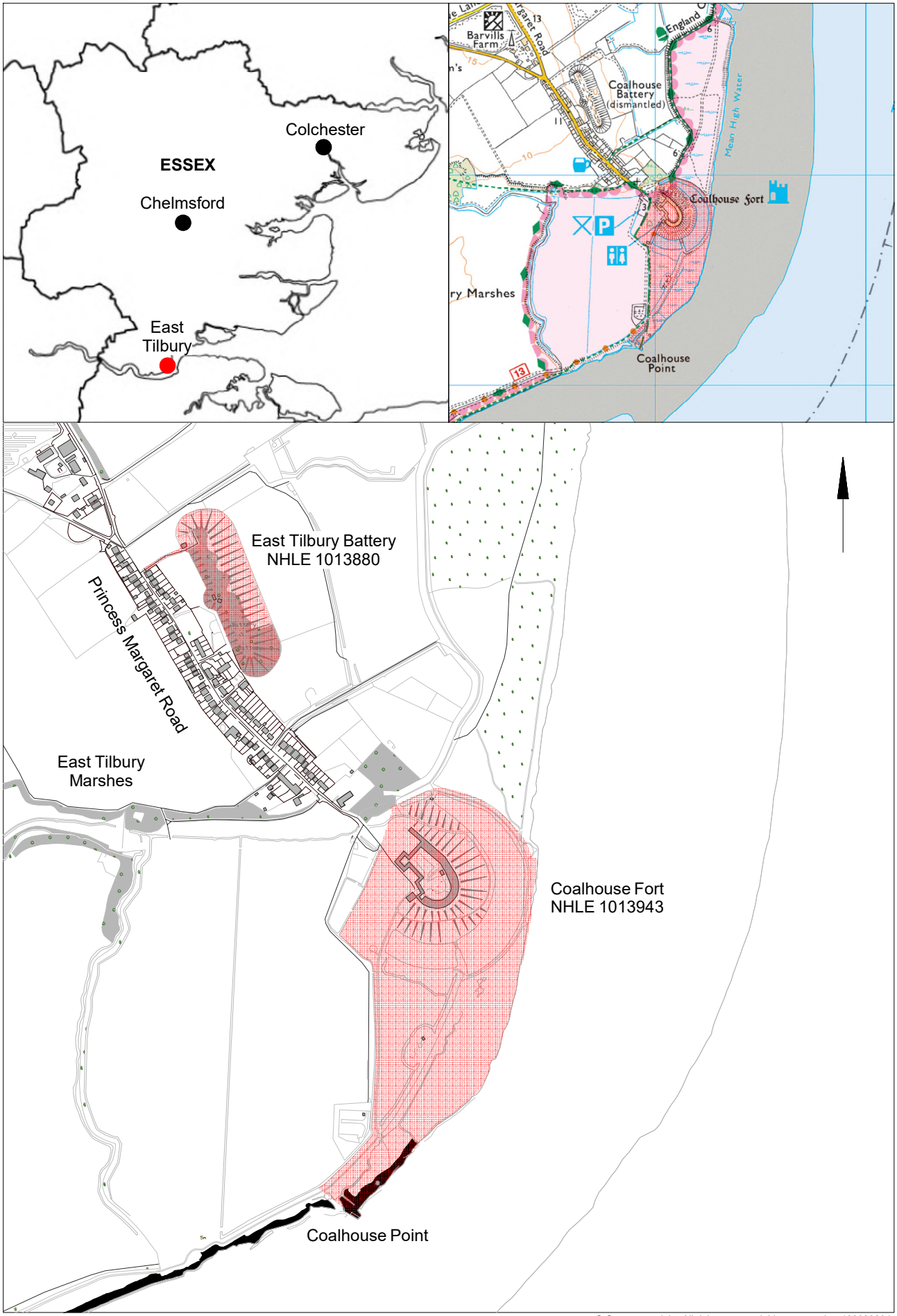
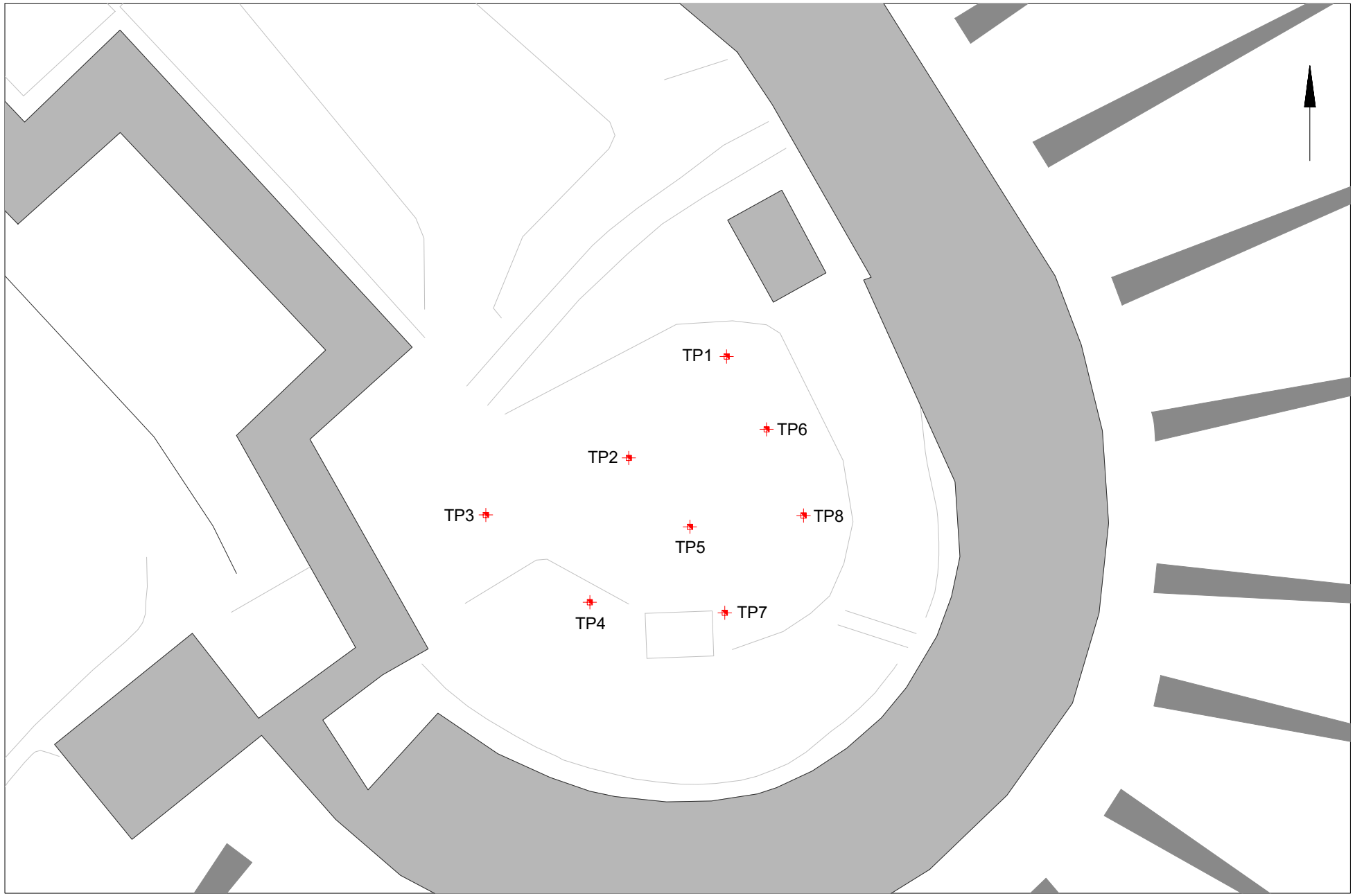





Fig 1 Site location.






0 500 m

Fig 2 GI test pit locations.

# OASIS Summary for colchest3-528082

| | |
|---|---|
| OASIS ID (UID) | colchest3-528082 |
| Project Name | Archaeological monitoring and recording at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, RM18 8PB: October 2024 |
| Sitename | Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, RM18 8PB |
| Sitecode | EEX60356 |
| Project Identifier(s) | 2024/09g |
| Activity type | Watching Brief |
| Planning Id | |
| Reason For Investigation | Scheduled monument consent |
| Organisation Responsible for work | Colchester Archaeological Trust |
| Project Dates | 29-Oct-2024 - 29-Oct-2024 |
| Location | Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, RM18 8PB<br>NGR : TQ 69092 76810<br>LL : 51.4650008385325, 0.432873712443294<br>12 Fig : 569092,176810 |
| Administrative Areas | Country : England<br>County/Local Authority : Thurrock<br>Local Authority District : Thurrock<br>Parish : Thurrock, unparished area |
| Project Methodology | Archaeological monitoring and recording of all groundworks as specified in the scheduled monument consent and project wsi. |
| Project Results | Archaeological monitoring and recording was carried out at Coalhouse Fort, Princess Margaret Road, East Tilbury, Essex, during the excavation of geotechnical survey pits. The Victorian Fort, with its associated railway link and jetty and its rifle range, also includes the foundations of an 16th-century `blockhouse' coastal battery, a late 19th century 'Quick-Firer' battery and a low-level radar tower dating from World War II. Monitoring revealed modern layers and features including buried gravels from an earlier parade ground surface sealing buried topsoil, and a bedding layer for part of the demolished railway. |
| Keywords | Parade Ground - 20TH CENTURY - FISH Thesaurus of Monument Types<br>Railway - POST MEDIEVAL - FISH Thesaurus of Monument Types |
| Funder | County Council Essex County Council |
| HER | Scheduled Monument Casework - unRev - STANDARD |
| Person Responsible for work | Adam Wightman, Chris Lister |
| HER Identifiers | HER Event No - EEX60356 |
| Archives | Digital Archive - to be deposited with Archaeology Data Service Archive; |

**Report generated on: 18 Nov 2024, 15:25**