

Written Scheme of Investigation (WSI) for an archaeological excavation at Fingringhoe Wick, Lodge Lane, Langenhoe, Colchester, Essex, CO5 7LX

District: Colchester
Parish: Abberton & Langenhoe
NGR: TM 03143 17124 (centre)

Planning reference: 181189

Commissioned by: Colin Best (Tilbury Douglas)
On behalf of: Tilbury Douglas

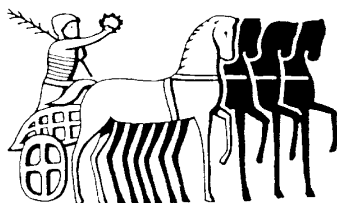
Curating museum: Colchester/ADS Archaeology

CHER project code: tbc
CAT project code: 2022/02q
Oasis project ID: colchest3-505060

Fieldwork Manager: Adam Wightman
Contracts Manager: Chris Lister

CBC monitor: Simon Wood

This WSI written: 03.03.2022



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Site location and description (Fig 1)

The site lies to the south of the village of Fingringhoe and to the south-east of the village of Langenhoe, Essex, within an area of reclaimed salt marsh that forms part of the Fingringhoe Range military zone. The ranges cover approximately 18 hectares in size and currently comprises an area of rough grassland with patches of scrub and derelict military hardware. It is bordered by areas of marshland and grassland. The site is centred on National Grid Reference (NGR) TM 03143 17124.

Proposed work

The development comprises the construction of 2 No. 600 metre Firing Ranges with eight-metre high stop-butts and facilities, 2 No. control buildings, 1 No. range support building, together with associated demolition and site clearance work, access, turning areas, parking areas, drainage and associated infrastructure.

Archaeological background

The following archaeological background draws on the Colchester Archaeological Trust report archive, the Colchester Historic Environment Record (CHER) accessed via the Colchester Heritage Explorer (www.colchesterheritage.co.uk):

Prior to the archaeological evaluation undertaken by Colchester Archaeological Trust in 2018 (CAT Report 1299) there was no direct evidence for prehistoric activity within the site and little within the wider area. Previous surveys along the Essex coastline have identified Mesolithic sites and buried Neolithic land surfaces in other locations along the Colne, Crouch and Blackwater estuaries. Similarly, little Bronze Age activity has been recorded in the wider area although occupation evidence exists some 3km to the north, and 'burnt mound' sites have been identified in the coastal surveys mentioned above. It is possible that the 'Red Hill' salt production sites recorded within the immediate and surrounding area may originate in the Iron Age, with continuing usage into the Roman period.

It has been suggested that Fingringhoe may have acted as a harbour and supply base for Colchester during the early military phase of Roman settlement (Crummy 1997). Quarrying on land now known as the Fingringhoe Wick Nature Reserve (3km north-east) in the 1930s (followed by subsequent excavations) revealed Claudian-Neronian material from pits, parts of a cemetery, two timber-lined wells and a possible landing place, as well as at least three Roman period houses with hypocausts and tessellated pavements (CHER MCC8785, MCC8790). Military equipment and substantial quantities of pottery and coins were also found (Crummy 1997).

The development site and immediate surrounding area is the location of an extensive salt production industry, dating to the Roman period, but possibly of Late Iron Age origin. Evidence of this industry primarily takes the form of 'red hills'; mounds of red earth deriving from the rubble of clay structures used in the salt-making process that have been scorched red by fires used to evaporate sea water to make salt.

There are no recorded Anglo Saxon or early medieval sites or finds dating to this period within the site itself or the surrounding area, although it is probable that this part of the coastline was used for seasonal sheep pasturage, as well as activities such as fowling, fishing and foraging.

In the medieval period the Domesday Survey records the settlement of Langenhoe to the west as having meadow, pasture, woodland, a mill and salthouse, as well as recorded livestock including 300 sheep. The place name 'wick' appears on historic mapping immediately adjacent to the site, meaning a dairy associated with sheep's cheese making. This suggests that the immediate area was utilised as sheep pasturage, following the reclamation of the salt marshland.

The reclamation of the salt marsh and use of the area for pasturage continued until the late 19th century, when the Fingringhoe Ranges were created by the War Office. This usage has

continued up until the present day, with the site having been recently used as a grenade firing range.

2018 evaluation

A pre-determination archaeological evaluation comprising twenty-two trial-trenches was carried out at Fingringhoe Ranges in 2018. Each trench measured 60m long by 4m wide. Although there were no significant archaeological remains in twelve of the trenches significant contexts included a Late Iron Age/Roman red hill in trench T6 and a concentration of Roman features in trench T1 consisting mainly of ditches and a large number of pits, 0.24-0.3m below current ground level. Finds from the features in T1 included pottery sherds, briquetage, ceramic building material, animal bone, five copper-alloy coins, two iron bolt-heads and the remains of a spearhead. There were three Bronze Age/Late Bronze Age features in trenches T3, T4 and T11 and two medieval features in trenches T5 and T6. (CAT Report 1299, ECC4231).

2021 Phase 1 Car Park excavation

An archaeological excavation was carried in advance of the construction of the Phase 1 car park. During this excavation 17 pits, a pit/post-hole, a post-hole and a pit/tree-throw were uncovered. Three features were dated to the prehistoric period and three to the Roman period. Three more were modern and eleven were undated (CAT Report 1735, ECC4670).

Planning background

A planning application (181189) was submitted to Colchester Borough Council in May 2018 proposing the *construction of 2 No. 600 metre Firing Ranges with eight-metre high stop-butts and facilities, 2 No. control buildings, 1 No. range support building, together with associated demolition and site clearance work, access, turning areas, parking areas, drainage and associated infrastructure.*

As the site lies within an area highlighted by the CHER as having a high potential for archaeological deposits, an archaeological condition was recommended by the Colchester Borough Council Archaeological Advisor (CBCAA). The recommended archaeological condition is based on the guidance given in the *National Planning Policy Framework* (MHCLG 2019).

Based on the results of the 2018 evaluation archaeological mitigation is required in advance of the development. This will take the form of five open area excavations.

Requirement for work (Fig 2)

The archaeological requirement is archaeological excavation. Details are given in a Project Brief written by CBCAA (CBC 2021).

Specifically,

- Strip map and record excavation within the area of the nine trenches defined by the evaluation as containing archaeological features where earth-moving is due to take place but within the stripped easement.
- Full excavation of the 'red hill' seen in T16.

The five excavation areas will comprise of:

Area	Evaluation trenches covered	Size (m2)
Area A	T1	4,520
Area B	T3-T6	24,520
Area C	T16-T17 including the 'red hill'	12,845
Area D	T11-T12	7,800
Area E	T21	4,020
<u>Total coverage</u>		<u>53,705</u>

The excavation areas involve a 20m buffer extension around the evaluation trenches containing features. If further features are defined within the buffer areas a further 20m may be extended to confirm the full extent of the archaeological remains are defined and recorded.

If unusual, significant or unexpected remains are encountered the CBCAA will be informed immediately. Should significant archaeological remains continue outside of the stripped area expansion of the excavation area may be required.

Amendments to the brief, and this WSI, may be required to ensure adequate provision for archaeological recording.

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 2014a-d)
- 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 2021)
- The Project Brief issued by CBCAA (2021)

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 CBCAA 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 work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> will be initiated and key fields completed on Details, Location and Creators forms. At the end of the project all parts of the OASIS online form will be completed for submission to CHER. This will include an uploaded .PDF version of the entire report.

A unique HER event number will be obtained from the CBCAA prior to the commencement of fieldwork. The curating museum will be notified of the details of the project and the event code, which will be used to identify the project archive when depositing at the end of the project.

Staffing

The number of field staff for this project is estimated as follows:

- Excavation of Areas A,-E – One Project Officer plus seven archaeologists for 75 days.

In charge of day-to-day site work: Ben Holloway/Harvey Furniss/Nigel Rayner

Excavation methodology

Where appropriate, modern overburden and any topsoil stripping/levelling will be performed using a mechanical excavator equipped with a toothless ditching bucket under the supervision and to the satisfaction of a professional archaeologist. If no archaeologically significant deposits are exposed, machine excavation will continue until natural subsoil is reached.

Where necessary, areas will be cleaned by hand to ensure the visibility of archaeological deposits.

If archaeological features or deposits are uncovered, time will be allowed for these to be excavated, planned and recorded.

There will be sufficient excavation to give clear evidence for the period, depth and nature of any archaeological deposit. For linear features 1m wide sections will be excavated across their width to a total of at least 10% of the overall length. Discrete features, such as pits, will have 50% of their fills excavated, although certain features may be fully excavated.

Complex archaeological structures such as walls, kilns, ovens or burials will be carefully cleaned, planned and fully recorded, but where possible left *in situ*. Only if it can be demonstrated that the complex structure/feature is likely to be destroyed by groundworks, and only then after discussion with the CBCAA, will it be removed.

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

The use of a hand held auger (or a power auger where appropriate) will be used where necessary to gain information from very deep deposits/features.

A metal detector will be used to scan all trenches both before and during excavation. This will be carried out by trained CAT staff under the supervision of project manager/Project Officers Adam Wightman, Nigel Rayner, Ben Holloway or Harvey Furniss who have over 5 years experience of metal detecting on archaeological sites. Experienced metal detectorist Geoff Lunn will be available for advice and support throughout the project. Geoff has 4 years experience and has worked with CAT to recover finds from recent excavations at the Mercury Theatre and Essex County Hospital sites in Colchester, and who has also worked with the Colchester Archaeological Group, Suffolk Archaeology, Access Cambridge Archaeology, The Citizen Project (MOLA) and others. If considered necessary, Geoff will be employed by CAT for to assist with the metal detecting. All finds will have their location recorded via GPS or with the Total Station. All spoil heaps will also be scanned and 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. A representative section will be drawn to include ground level and the depth of machining. The normal scale will be site plans at 1:20 and sections at 1:10, unless circumstances indicate that other scales would be appropriate.

The photographic record will consist of general site shots, and shots of all archaeological features and deposits. A photographic scale (including north arrow) shall be included in the case of detailed photographs. Standard "record" shots of contexts will be taken on a digital camera. A photographic register will accompany the photographic record. This will detail as a minimum feature number, location, and direction of shot.

Site surveying

The excavation area 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 micromorphical and other pedological sedimentological analysis. Environmental bulk samples will be 40 litres in size (assuming context is large enough).

CAT has an arrangement with Val Fryer/Lisa Gray whereby any potentially rich environmental layers or features will be appropriately sampled as a matter of course. CAT staff will process samples (unless of a complex nature) and the flots will be sent to VF/LG for reporting.

Sampling strategies will address questions of:

- the range of preservation types (charred, mineral-replaced, waterlogged) and their quality
- concentrations of macro-remains
- and differences in remains from undated and dated features
- variation between different feature types and areas of site

Provision will be included (where necessary) for column or core samples to be taken, for the assessment and/or full analysis of those samples, and for absolute dating of the sequence.

Provision will also be made (where necessary) for the identification and absolute dating of suitable deposits of charred remains. Should VF/LG make a recommendation that suitable samples not datable by other means (ie associated finds) be submitted for absolute dating, then these samples will be sent to the SUERC Radiocarbon Dating Laboratory at Glasgow University for analysis.

Should any complex, or otherwise outstanding deposits be encountered, VF/LG will be asked onto site to advise. Waterlogged 'organic' features will always be sampled. In all cases, the advice of VF 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.

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 CBCAA.

CBCAA will be notified immediately if any human remains are encountered during the excavation.

If circumstances indicated it were prudent or necessary to remove remains from the site during the excavation, 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. Human remains removed from site for analysis this may involve radiocarbon dating (see finds section).

If it cannot be demonstrated that future ground works are able to avoid impacting them, burials will be fully excavated. However, 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 CBCAA 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 supplied as both a jpeg and in raw uncompressed format (TIFF), with metadata will be embedded into the raw file 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. CAT may use local volunteers to assist the CAT Finds Officer with this task.

Most of our finds reports are written internally by CAT Staff under the supervision and direction of Philip Crummy (Director) 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, small groups only)

small finds, metalwork, coins, etc: Laura Pooley

non-ceramic bulk finds: Laura Pooley

flints: Adam Wightman

environmental processing: Bronagh Quinn

project osteologist (human remains): Meghan Seehra

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:

flint: Tom Lawrence

prehistoric pottery: Stephen Benfield / Nigel Brown / Paul Sealey

Roman pottery: Stephen Benfield / Paul Sealey / Jo Mills / Gwladys Monteil

Roman brick/tile: Ian Betts (MOLA)

Roman glass: Hilary Cool

small finds: Nina Crummy

other: EH 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 CBCAA.

A contingency will be made in the budget for scientific assessment/analysis. This can include soil micromorphological assessment, absolute dating in the event that archaeomagnetic and/or (more probably) radiocarbon dating is required, if burning is encountered or human remains (in which case it might be necessary to lift a small sample for absolute dating). The Historic England Regional Science Advisor will be consulted for advice on this.

Post-excavation assessment

Once fieldwork has finished the need for a post-excavation assessment will be discussed and agreed with CBCAA. This may include discussion as to whether there is a need for and extent of radiocarbon dating of appropriate contexts and/or further detailed scientific analysis of other aspects of the project.

If a post-excavation assessment is required by CBCAA, it will be normally be submitted within 2 months of the end of fieldwork, or as quickly as is reasonably practicable and at a time agreed with CBCAA. It will be a clear and concise assessment of the archaeological value and significance of the results, and will identify the research potential in the context of the Regional Research Framework. It will include an Updated Project Design, with a timetable, for analysis, dissemination and archive deposition.

Where archaeological results do not warrant a post-excavation assessment, preparation of the normal site report will begin.

Results

Notification will be given to CBCAA 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 CBCAA as a PDF.

The report will contain:

- The aims and methods adopted in the course of the archaeological project.
- Location plan of the excavation area in relation to the proposed development. At least two corners of the area will be given 10 figure grid references.
- A section drawing showing depth of deposits from present ground level with Ordnance Datum, vertical and horizontal scale (if this can be safely done)
- Archaeological methodology and detailed results including a suitable conclusion and discussion and results referring to Regional Research Frameworks (Medlycott 2011 and <https://researchframeworks.org/eoe/>).
- All specialist reports or assessments
- A concise non-technical summary of the project results.

An EHER summary sheet will also be completed within four weeks and supplied to CBCAA.

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

Archive deposition

It is a policy of Colchester Borough Council that the integrity of the site archive be maintained (i.e. all finds and records should be properly curated by a single organisation), with the archive available for public consultation. To achieve this desired aim it is assumed if there are any artefacts that the full archive will be deposited in Colchester Museums *unless otherwise agreed in advance*. (A full copy of the archive shall in any case be deposited).

By accepting this WSI, the client agrees to deposit the archive, including all artefacts, at Colchester & Ipswich Museum.

The requirements for archive storage will be agreed with the curating museum. If the finds are to remain with the landowner, a full copy of the archive will be housed with the curating museum.

The archive will be deposited with Colchester & Ipswich Museum or an alternate repository (approved by COLEM and CBCAA) within 3 months of the completion of the final publication report, with a summary of the contents of the archive supplied to CBCAA.

If there are no archaeological finds retained from the evaluation the full digital archive will be curated with the Archaeology Data Service, or similar accredited digital archive repository, that safeguard the long-term curation of digital records. 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.

The CBCAA will be notified of the archiving timetable throughout the project and once deposition has occurred.

A digital / vector drawing of the site to be given to the CBCAA for integration into the HER.

Monitoring

CBCAA 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 CBCAA one week in advance of its commencement.

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

CBCAA will be notified when the fieldwork is complete.

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

References

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

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|-----------------|-------|---|
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| CAT Report 1299 | 2018 | <i>Archaeological evaluation at Fingringhoe Ranges, Lodge Lane, Langenhoe, Essex – June-July 2018</i> , by L Pooley |
| CAT Report 1735 | 2022 | <i>Archaeological excavation at Phase 1 Car Park, Fingringhoe Ranges, Lodge Lane, Langenhoe, Colchester, Essex – October 2021</i> , by E Hicks and S Veasey |
| CBCAA | 2021 | <i>Brief for archaeological excavation at Fingringhoe Ranges, Lodge Lane, Langenhoe, Colchester, CO5 7LX</i> , by R Hoggett |
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| ClfA | 2014b | <i>Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives</i> . Updated October 2020 |
| ClfA | 2014c | <i>Standard and guidance for the collection, documentation, conservation and research of archaeological materials</i> . Updated October 2020 |
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| Crummy, P | 1997 | <i>City of Victory: the story of Colchester - Britain's first Roman town</i> |
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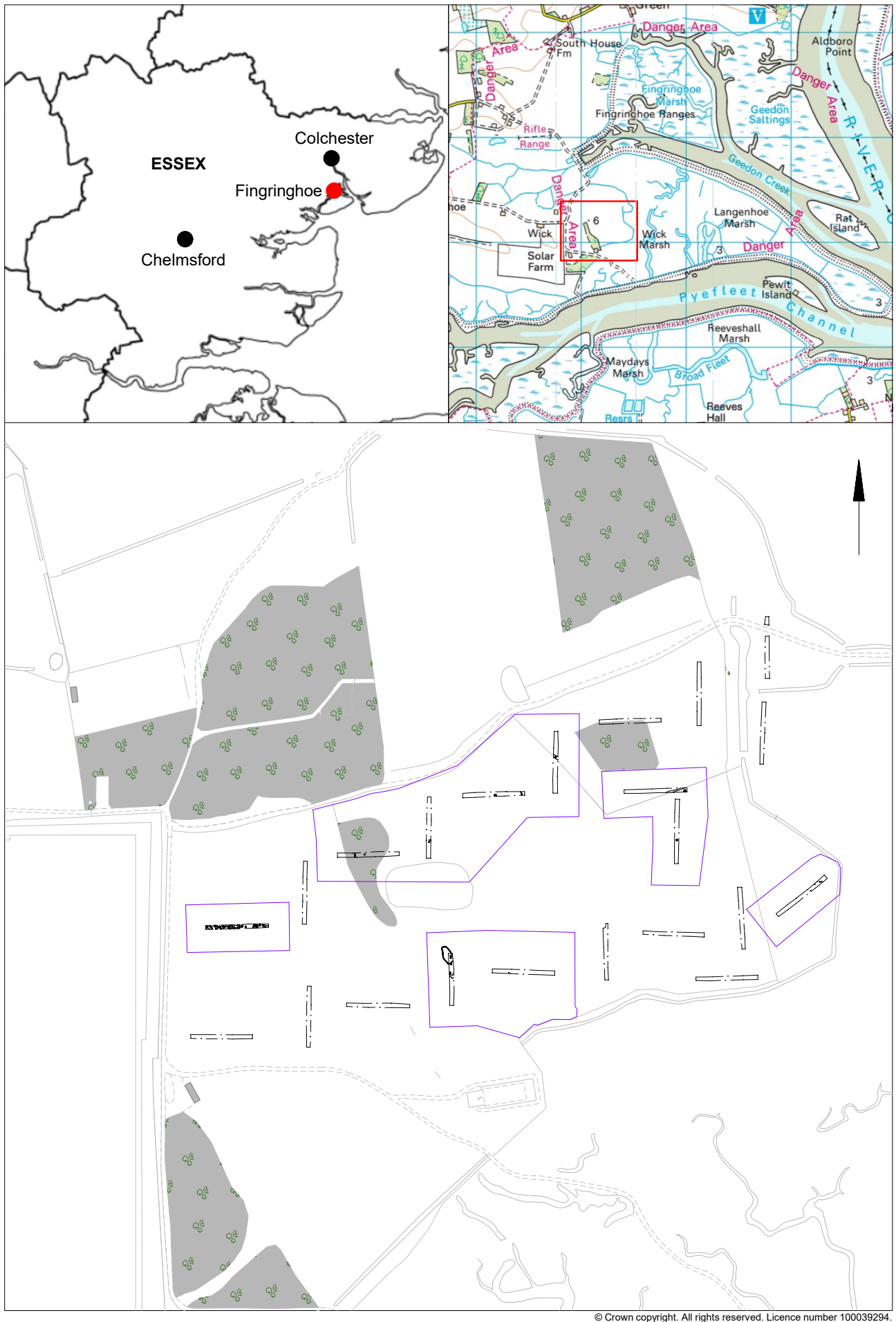
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Historic England	2015a	<i>Digital Image capture and File Storage: Guidelines for best practice</i> . By. S Cole & P Backhouse
Historic England	2015b	<i>Management of Research Projects in the Historic Environment (MoRPHE)</i>
Historic England	2018	<i>The Role of the Human Osteologist in an Archaeological Fieldwork Project</i> , by S Mays, M Brickley and J Sidell
Medlycott, M	2011	<i>Research and archaeology revisited: A revised framework for the East of England</i> . East Anglian Archaeology Occasional Papers 24 (EAA 24)
MHCLG	2019	<i>National Planning Policy Framework</i> . Ministry of Housing, Communities and Local Government.

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Fig 1 Site location and excavation areas.

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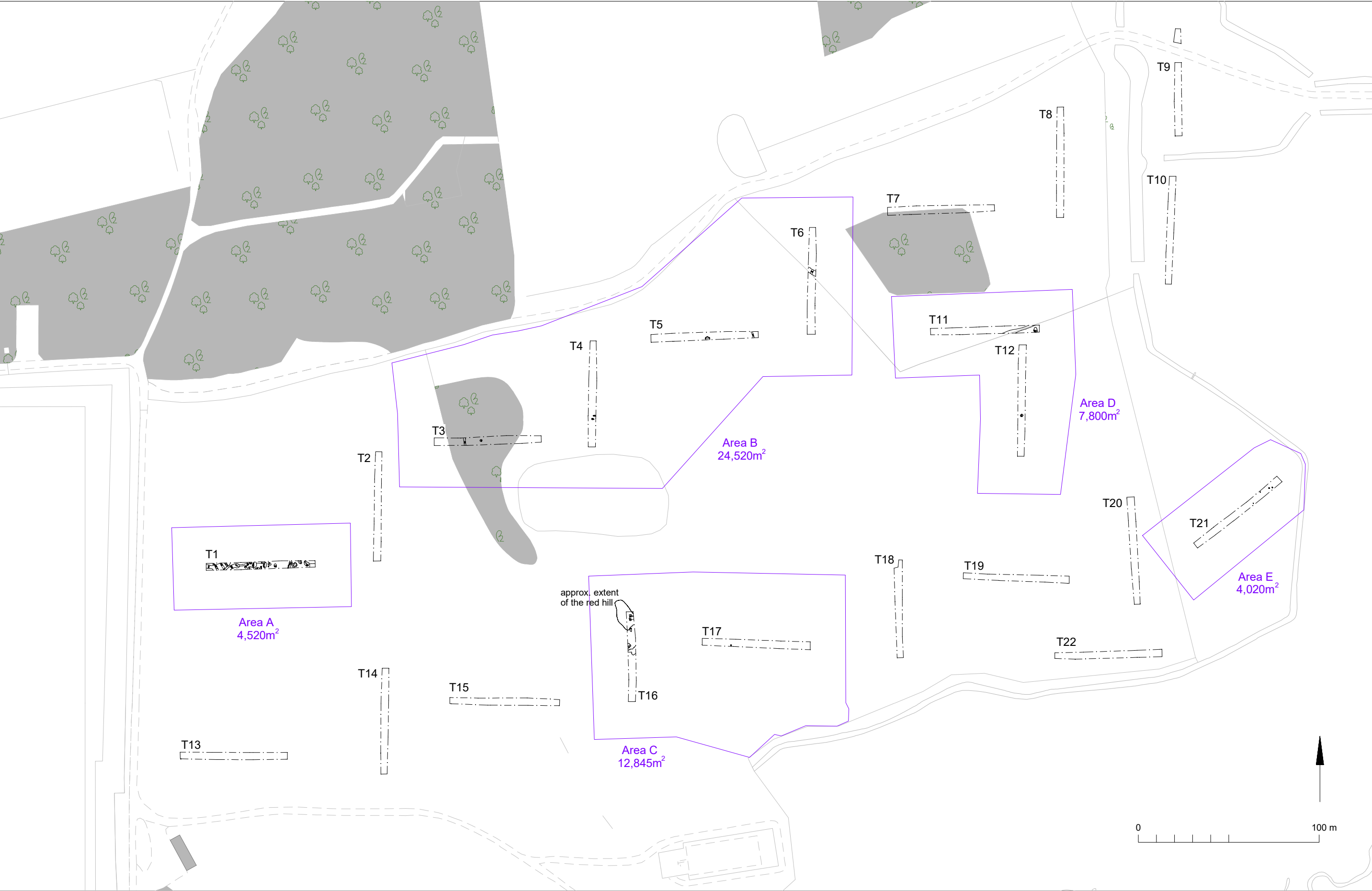


Fig 2 Excavation areas in relation to trial trenching results