

R.S.P. B. Reserve Aveley Marshes Essex



Archaeological Watching Briefs and Recording Actions



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AVELEY MARSHES ESSEX

ARCHAEOLOGICAL WATCHING BRIEF AND RECORDING ACTIONS 2001-2 REPORT

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SUMMARY

Between August 2001 and February 2002, OA carried out an archaeological watching brief within the disused MOD rifle range on Aveley Marshes. The work was commissioned by The Royal Society for the Protection of Birds (RSPB) during the ongoing development of the marsh as a nature reserve. The work involved monitoring topsoil stripping, excavation of new and existing drainage ditches, and a boundary ditch along the eastern and southern extents of the reserve. Late Holocene estuarine silt-clay alluvium, and to a limited extent underlying peat deposits were exposed. No significant archaeological remains were identified during the ditching works. An Early 20th Century tramline associated with the disused rifle range was identified during topsoil stripping. Although of low intrinsic value the feature is considered an interesting feature in terms of the range's group value

1 INTRODUCTION

1.1 Location and scope of work

- 1.1.1 Between August 2001 and February 2002 Oxford Archaeology (OA) carried out an archaeological watching brief on Aveley Marsh. The work was commissioned by The Royal Society for the Protection of Birds (RSPB) during the ongoing development of the marsh as a nature reserve
- 1.1.2 The reserve is located in the boroughs of Havering in Greater London (the northern part of the site) and in Thurrock in the County of Essex (the southern third of the site). Figure 1 shows the location of the site. The current investigation was carried out entirely on Aveley Marsh, within the disused MOD rifle range, in the eastern part of the reserve. The site is bounded by the London, Southend and Tilbury and CTRL (Channel Tunnel Rail Link) railway corridors to the north, a disused Army camp and range munitions magazines to the east, the River Thames to the South, and Wennington Marsh to the west. The site is accessed via Tankhill Road to the east.
- 1.1.3 Part of the programme of works for the development of the nature reserve consisted of small scale topsoil stripping in areas adjacent to the rifle butts, excavation of existing, and additional, drainage ditches, and the excavation of a large boundary ditch along the southern and eastern edge of the site (Figure 2).

1.2 Geology and topography

- 1.2.1 The site lies at c. 1.00m above OD. It is situated on a low-lying alluvial floodplain in a meander of the River Thames. Immediately to the northeast of the reserve lies the higher ground of the gravel terrace at 5-10m OD.
- 1.2.2 Modern landuse is characterized by the disused rifle range structures (built brick firing butts and firing points comprising low earthworks) and low intensity cattle grazing. The marsh is covered by rough grass, reed beds and shallow areas of open

water. It is criss-crossed by a series of drainage ditches and low earthworks associated with medieval, and later, land reclamation.

- 1.2.3 The drift geology of the site consists of Holocene alluvial clay-silts and peat, overlying Pleistocene fluvial deposits at depth. The solid geology consists of Cretaceous Upper Chalk in the eastern part of the site, Palaeocene Thanet Beds and Woolwich/Reading Beds in the center, and London Clay to the west. (British Geological Survey sheets 257 and 271)

1.3 Archaeological and historical background

- 1.3.1 The archaeological background to the watching brief has been detailed in *Rainham, Wennington and Aveley Marshes. Desk-based Assessment*. (OAU 2001 Client Report) and will not be repeated here.
- 1.3.2 From information obtained from borehole surveys, previous work, and the ongoing CTRL archaeological watching brief on Rainham and Wennington Marshes it was expected that the ditching works would impact largely on the upper minerogenic silty clay alluvium that exists at this location at thicknesses of 1.00-2.00m directly beneath the topsoil. Archaeological remains dating from Romano-British to post-medieval periods have been identified recently on the CTRL watching brief within the RSPB reserve. This took the form of isolated finds and buried soils.
- 1.3.3 Beneath the upper silty clay alluvium lies a major peat deposit, impacted upon to a limited extent by the ditching works. The peat has the potential to expose significant prehistoric or early historic, archaeological remains. The discovery of well-preserved wooden trackways sealed beneath the alluvium has been reported at Beckton, Erith and Rainham (Meddens 1993 quoted in MoLAS 2000, 89). The trackways would have provided access across the marshy ground of the intertidal zone for a number of activities including fishing (including fish traps), grazing, fowling and sites of salt manufacture. The waterlogged conditions and the sealing layer of alluvium often means that the remains of any wooden features or objects are well preserved.

2 PROJECT AIMS AND METHODOLOGY

2.1 Aims

- 2.1.1 To identify and record the presence/absence, extent, condition, quality and date of archaeological remains in the areas affected by the development works.
- 2.1.2 To make available the results of the archaeological investigation.

2.2 Methodology

2.2.1 Description of works:

- *Drainage ditches* – 1000m of existing ditch was recut. This involved the excavation of a 1.10m deep 1.0m wide wedge of deposits on one side of the ditch. 220m of additional ditch was excavated at various locations in the eastern and central sectors of the marsh. These measured on average 3.0-5.0m wide at ground level, excavated to a depth of 1.30m. The western edges were graded up at a depth of 0.20-0.40m BGL over 2-3m to facilitate seasonal flooding of adjacent marshland. Excavation was carried out by the backactor method. No dewatering was carried out during excavation.
- *Boundary Ditch* – 1700m of ditch was excavated at the southern and eastern extents of the reserve to form the new boundary ditch. Works were confined to a corridor 20m wide, located 11m inside the existing site boundary. The ditch was excavated to a width of 8m at ground level and measured 1.50-1.80m in depth. The base of the ditch was flat bottomed and c.1.5m wide, with edges rising at a 45° angle to a ledge, c.0.5m wide and c.0.8m deep, before rising at a 2:1 gradient for the remainder of its width. Excavation was carried out using the backactor method. No dewatering was carried out during excavations.
- *Topsoil stripping*: Removal of topsoil took place periodically over small areas in the vicinity the rifle butts as part of the construction of cattle enclosures. This was undertaken by a mechanical excavator fitted with a ditching bucket.

2.2.2 *Monitoring*: All construction activities involving intrusive works i.e. ditch recutting and excavations have been subject to the watching brief. The level of monitoring undertaken varied from weekly site inspections to continuous machine watching, depending on;

- Visibility during excavation, dictated largely by the method of excavation and groundwater levels.
- The depth of excavation and nature of deposits exposed i.e. modern disturbed ground, minerogenic clay-silt, and peat.
- Location, i.e. relative distance from gravel terrace and river.

2.2.3 *Recording*: A detailed record has been kept of all activities associated with intrusive works comprising a minimum of:

- *Site code*
- *Date*
- *Personnel present*
- *Location of areas observed and marked on relevant plans.*
- *A description of works observed*
- *Type and extent of any activity including:*
 - *Depths*

- *Measure of confidence that any archaeological remains would be observed and reasons.*
- *All areas and horizons unaffected by construction activity*
- *Reasons why any particular area of the works was not observed*
- *Summary location and description of any modern features*

2.2.4 All archaeological features were planned at a scale of 1:100 and where excavated their sections drawn at scales of 1:20. All excavated features were photographed using colour slide and black and white print film. A general photographic record of the work was made Recording followed procedures detailed in the *OAU Fieldwork Manual* (ed D Wilkinson, 1992).

3 RESULTS

3.1 Description of deposits

3.1.1 The deposits exposed during excavations were generally consistent. 0.25-0.30m of modern topsoil overlay 0.50-0.55m of mid orangey brown silty clay alluvium. This deposit was tenacious and firm although the upper 0.30m was bioturbated by modern roots. This deposit graded into 0.23-0.30m of gleyed mid bluish grey silty clay alluvium with moderate Fe mineralization within root channels. In the base of excavations a dark brownish black, moderately humified, peat was periodically exposed containing frequent small woody inclusions. This deposit was exposed, on average, to a thickness of 0.20-0.30m, although it was not identified in the western stretches of the boundary ditch. No worked wood or artefacts were identified in the deposit. Occasional prolapsed tree trunks were, however, noted, some with attached root balls, where exposure was increased to 1.80m below ground level, in the eastern sections of the boundary ditch. Notably, peat was absent in the base of excavations westwards, parallel, and immediately adjacent to, the existing Thames flood defenses.

3.2 Distribution of Archaeological Deposits

3.2.1 No significant archaeological features or deposits were identified during the ditching works. However, during topsoil stripping of a 12.5 x 25m area adjacent to the southernmost rifle butt, a set of NE/SW aligned early 20th Century tramlines were exposed (Figure 3).

3.3 Finds

3.3.1 The only finds identified during the watching brief were fragments of 20th century pottery, none of which were retained.

3.4 Palaeo-environmental remains

3.4.1 No palaeo-environmental samples were retrieved during the watching brief.

4 DISCUSSION AND CONCLUSIONS

4.1 Reliability

- 4.1.1 Monitoring took place on the basis of twice weekly visits to inspect the excavations. Continuous machine watching was not considered justified due to poor visibility. This was largely a result of the method of excavation i.e. the use of a mechanical excavator fitted with a toothed bucket, as well as consistently poor ground conditions due to high groundwater levels.
- 4.1.2 Modern disturbance appeared to be minimal over much of the area. Where present it was confined to discrete areas located around clay extraction pits towards the western section of the boundary ditch and only impacted upon the upper part of the silt-clay alluvium. Made up ground was noted at various points, to a maximum thickness of 0.50m, along the southern extent of the boundary ditch, overlying the alluvium. This is most likely associated with the construction of the modern flood defense constructed in the 1960s from imported material. The alluvium itself did not appear to be substantially truncated.
- 4.1.3 The absence of identified archaeological remains or finds within the upper silt-clays, is not unusual considering the nature of the depositional environment and the distance from the edge of the floodplain. This unit represents a period of marine transgression resulting from an increase in the rate of sea level rise (RSL) probably occurring in the early historic period (Devoy 1980). During periods of transgression low-lying areas became inundated with estuarine silts and clays. Occupation on the floodplain during transgressive phases would have been characterized by low level seasonal activities, which may have left only ephemeral traces.
- 4.1.4 The peat underlying the minerogenic clay-silts represents an earlier period of reduced RSL, when conditions would have been drier, and occupation on the floodplain may have been more intensive. The formation level of the excavations however, did not impact substantially on this unit.

4.2 Summary of results

- 4.2.1 1000m of ditch recutting and 1920m of new ditch sections have been monitored. Deposits exposed largely consisted of later Holocene minerogenic silt-clay estuarine alluvium. Underlying peat deposits were exposed only intermittently to a limited thickness. No significant archaeological remains were identified during the ditch works.
- 4.2.2 The set of tramlines identified adjacent to the rifle butts during topsoil stripping are probably associated with one of the range's former tramways. Several tramways are

known to have existed in the range, linked to the public (Midland) railway to bring troops into the Musketry Camp and Cordite store. One line is known to have served the Butts, carrying moving targets. The tramway was identified in the desk-based assessment (OAU 2001 *ibid.*) as having a low level of significance but is an interesting feature in terms of the range's group value.

APPENDICES

APPENDIX 1 BIBLIOGRAPHY AND REFERENCES

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Meddens F and Beasley M (1990) Wetland Use in Rainham, Essex. *London Archaeologist*. Winter 1990 Vol. 6 No. 9.

MoLAS (2000) *The archaeology of Greater London. An assessment of archaeological evidence for human presence in the area now covered by Greater London*. Museum of London Archaeology Service. Lavenham Press. Suffolk.

OAU (2001) *Rainham, Wennington and Aveley Marshes. Desk-based Assessment*. (Client report)

APPENDIX 2 SUMMARY OF SITE DETAILS

Site name: Rainham, Wennington and Aveley Marshes

Site code: RWAM-01

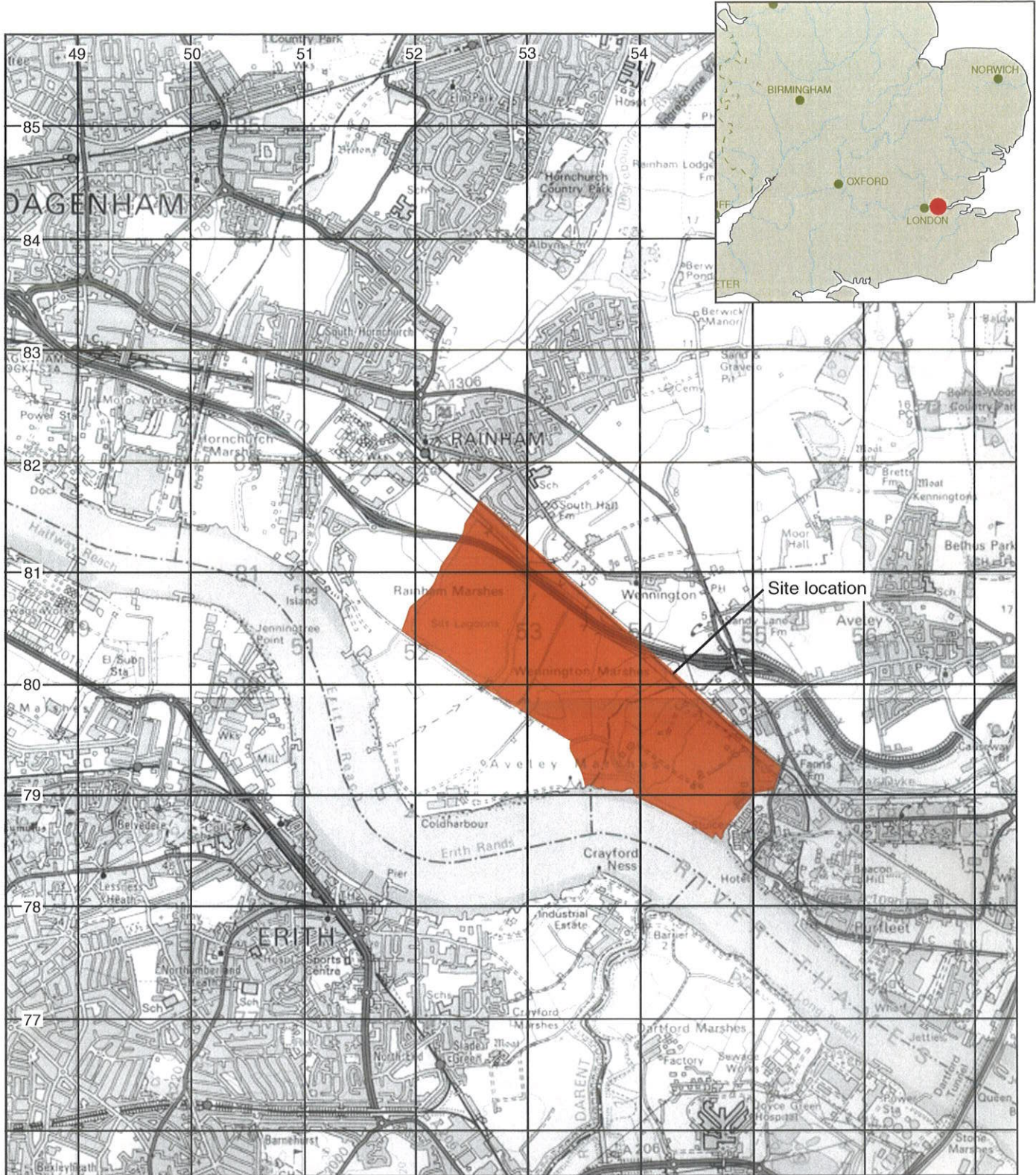
Grid reference: TQ 540970

Type of watching brief: General

Date and duration of project: August 2001-February 2002

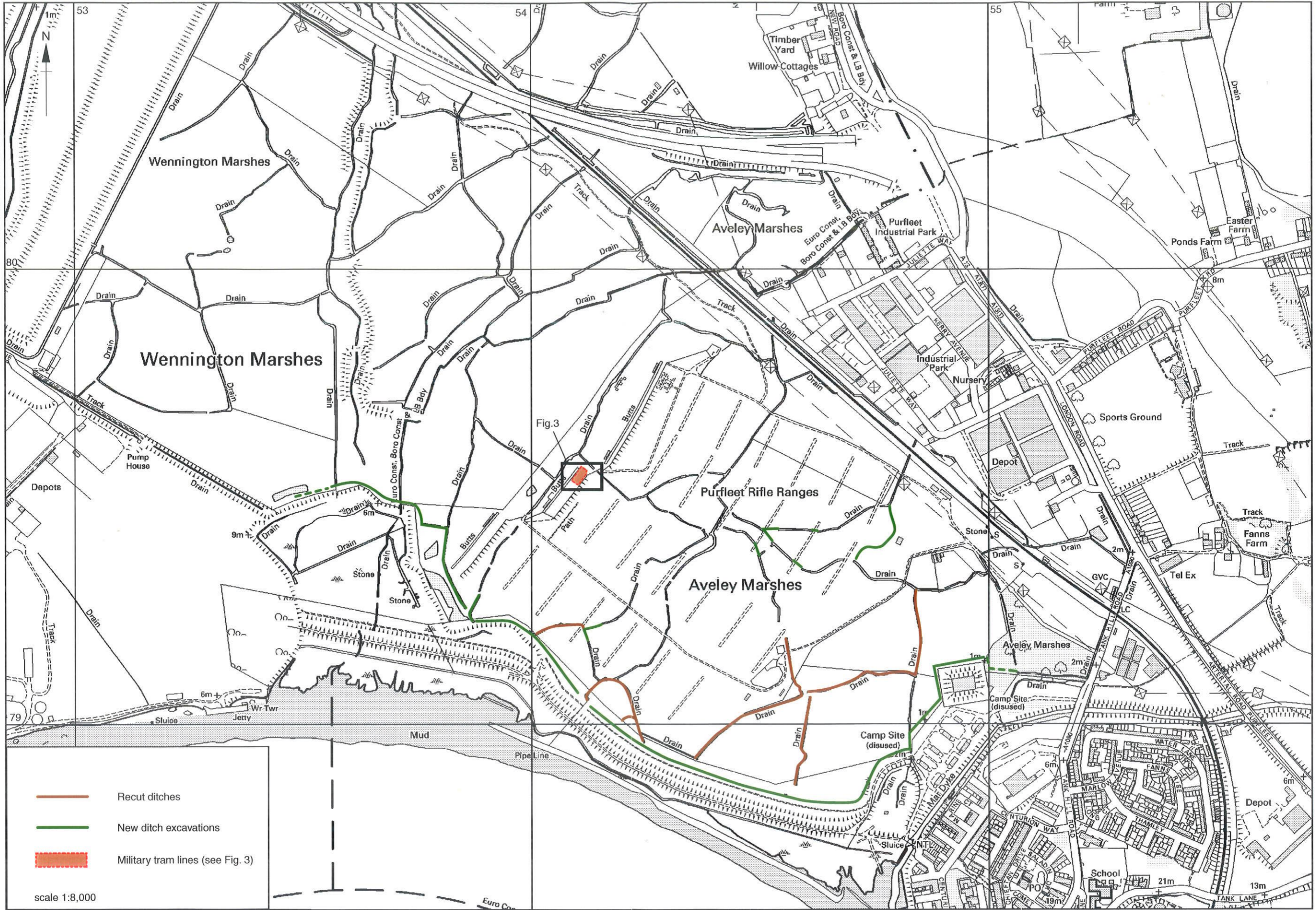
Summary of results: OA carried out an archaeological watching brief within the disused MOD rifle range on Aveley Marshes. The work was commissioned by The Royal Society for the Protection of Birds (RSPB) during the ongoing development of the marsh as a nature reserve. The work involved monitoring topsoil stripping, excavation of new and existing drainage ditches, and a boundary ditch along the eastern and southern extents of the reserve. Late Holocene estuarine silt-clay alluvium, and to a limited extent underlying peat deposits were exposed. No significant archaeological remains were identified during the ditching works. An E20thC tramline associated with the disused rifle range was identified during topsoil stripping. This is of low level significance, however, is considered an interesting feature in terms of the range's group value

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Figure 1: Site location



Legend:

-  Recut ditches
-  New ditch excavations
-  Military tram lines (see Fig. 3)

scale 1:8,000

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Figure 2: Location of Monitored Works

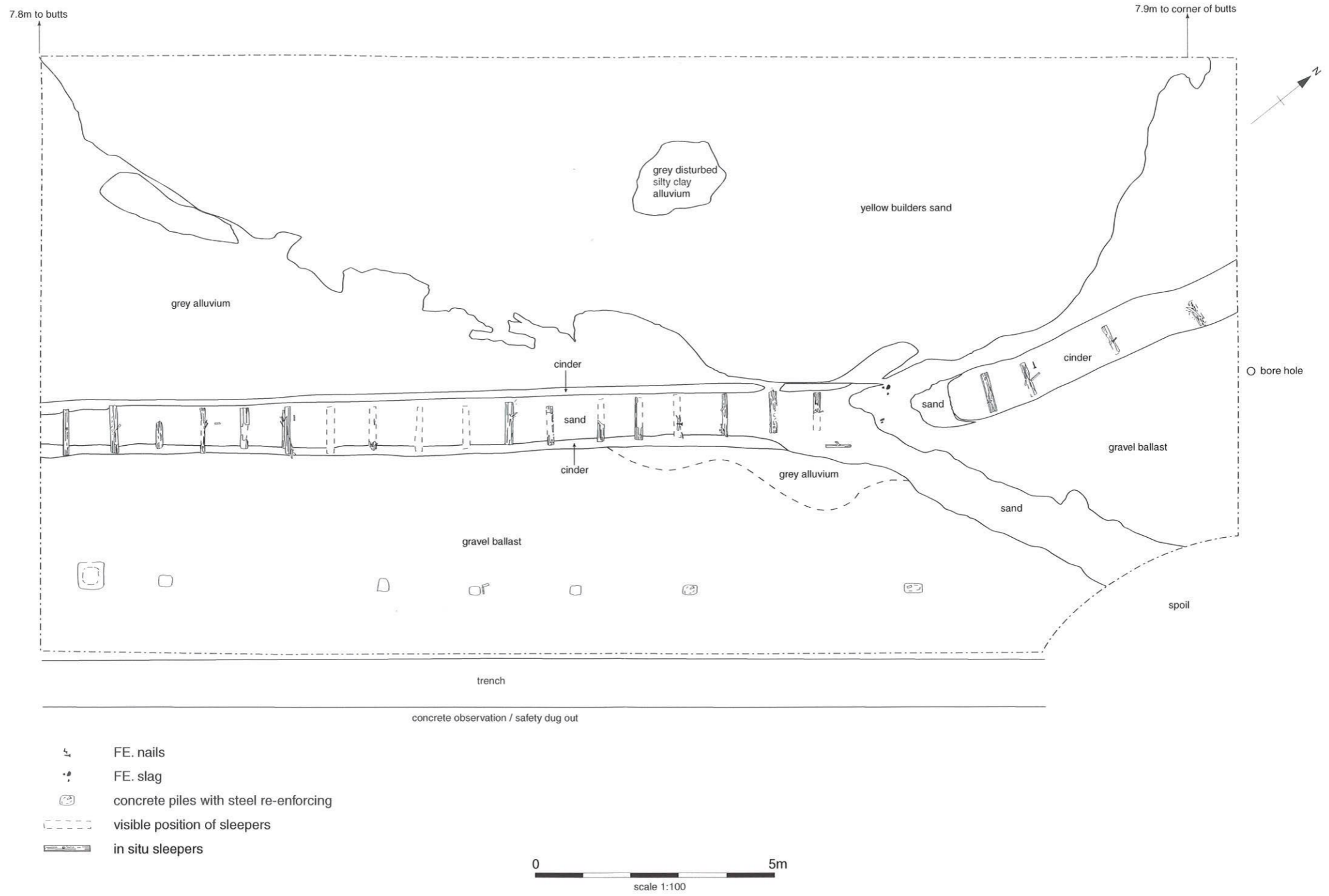


Figure 3: Plan of Early Twentieth Century Military Tram Lines



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