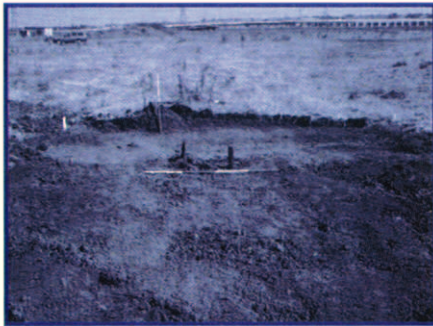


# RSPB Rainham Wennington and Aveley Marshes Reserve ESSEX



## Archaeological Evaluation Report



**Oxford Archaeology**

November 2004



**Client:**  
**Royal Society for the Protection of Birds**

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**RSPB Rainham, Wennington and Aveley Marshes Reserve, Essex***ARCHAEOLOGICAL EVALUATION REPORT*

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Cover Plate: View of Trench 1 across 100 yd fire point, showing section 1.

## SUMMARY

*In September 2004 Oxford Archaeology (OA) carried out an archaeological evaluation within Wennington Marsh and the disused MOD rifle range at Aveley Marsh. The work was commissioned by The Royal Society for the Protection of Birds during the ongoing development of the marsh as a nature reserve. The two evaluation trenches revealed the construction of a 20th century firing point, part of the Purfleet Rifle Range. The second trench was located over a ridge in the natural clay.*

### 1 INTRODUCTION

#### 1.1 Location and scope of work

- 1.1.1 In September 2004 Oxford Archaeology (OA) carried out an archaeological evaluation within Wennington Marsh and the disused MOD rifle range at Aveley Marsh (Fig. 1). The work was commissioned by The Royal Society for the Protection of Birds during the ongoing development of the marsh as a nature reserve.
- 1.1.2 A project brief was set by Richard Havis, Senior Archaeological Development Control Officer, Essex County Council.
- 1.1.3 OA prepared a Written Scheme of Investigation detailing how it would meet the requirements of the brief. The evaluation was part of the archaeological work required in the brief.

#### 1.2 Geology and topography

- 1.2.1 The site is situated on a low-lying alluvial floodplain in a meander of the River Thames. Immediately to the north-east of the reserve lies the higher ground of the gravel terrace at 5 to 10 m OD.
- 1.2.2 Modern land use is characterised by the disused rifle ranges (a total of three shooting structures, comprising one remaining butt and three mantlets) 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 centre, 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 produced in *Rainham, Wennington and Aveley Marshes, Desk-based Assessment* (OAU 2001 Client Report) as well as the previous interim report (OA 2002) and is summarized below.

- 1.3.2 The Prehistoric evidence is largely sub-surface and lies in and under buried landsurfaces which can probably be found across various areas of the reserve. Evidence for potential Neolithic occupation of the marshes has already been established and further ground disturbance works may well reveal other evidence for prehistoric activity.
- 1.3.3 Throughout the medieval and post-medieval periods, the marshes of Rainham, Wennington and Aveley were utilised for a number of different economic activities, dependent on the intertidal zone. These activities are likely to have been broadly similar to those undertaken in preceding periods, such as grazing, fishing (through the use of oyster pits and fish traps), fowling, pottery production (utilising alluvial clays), and salt manufacture.
- 1.3.4 Finally the marshes experienced a relatively radical transformation in the 20<sup>th</sup> century with the construction of two Rifle ranges, silt lagoons and most recently the A13 road improvement.
- 1.3.5 Purfleet shooting range and Aveley blockhouse lie within the historic military landscape of Aveley Marshes. Within this context these structures are the most dominant extant features. To the west of Mar Dyke, is a group of buildings including anti-aircraft magazines, guard posts and the earth traverse of a cordite store all dating to the early 20th century.
- 1.3.6 In 1859 the National Rifle Club was established, this was to encourage the newly-founded Rifle Volunteer Companies to practice their marksmanship. This initiated the construction of many rifle ranges around the country; examples include the Trent Range, Nottinghamshire (1895) and Lincolnshire (1901). There was a general feeling in the army that the experience of the South African War (1899-1902) had exposed serious weaknesses in the marksmanship, and general shooting ability of the British soldiers.
- 1.3.7 The 1897 OS maps at 25 inches to the mile (PRO papers: WO78/3666) reveal no trace of a range at Purfleet. Although local tradition would have it otherwise, there is no documentary evidence to suggest that the Purfleet magazine ever made use of range facilities west of the Mardyke. It was in 1906 that the War Department purchased land at the Purfleet for a rifle range. In 1910, the Purfleet Rifle Range is first mentioned in Kelly's Directory as being available for use by both regular and territorial units. The 25 inch Ordnance Survey map of 1920 first depicts the three ranges of gun butts this also clearly shows the tramways running to the east of the structures.
- 1.3.8 During both world wars there was considerable air defence action, this was firstly due to the fact that the Magazine/Range complex represented a target for aerial attack in its own right. Secondly, it lay alongside a main bomber-route to London. In March 1916, gunners at Purfleet, possibly located in the Blockhouse, shot down a Zeppelin airship. In April 1941, an anti-aircraft gunpit was hit by a bomb, four gunners were killed and the mounting wrecked. In June 1944, a flying bomb was shot down by Purfleet guns.

## 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.
- 2.1.2 To make available the results of the archaeological investigation.

### 2.2 Methodology

- 2.2.1 The two trenches were excavated with a 360° mechanical excavator fitted with a 1.8 m ditching bucket. The trenches were situated across the line of the rill (a shallow channel for drainage of the marsh) and carried out under archaeological supervision (Fig. 2).
- 2.2.2 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 *OA Field Manual* (OAU 1992).

## 3 RESULTS

### 3.1 Description of evaluation trenches

#### *Trench 1* (Fig. 3)

- 3.1.1 Trench 1 was excavated across the 100 yard fire point of the southern most rifle range. This was to allow the rill to flow under the fire point. The trench measured 7 m x 9 m x 0.5 m and exposed the natural (2) light brown clay. Constructed into this was a timber lined channel (5). It measured 7 m x 1.5 m x 0.08 m and was constructed of 0.08 m square stakes hammered into the ground with a 5 cm wide baton nailed to the stakes forming the edge of the channel. The channel was filled by a loose light gravel (6) with cinder and pebbles. This channel was constructed to allow the rill to flow under the fire point. The fire point was constructed using a compact dark brown clay (3) forming a low bank with a flat top and measured 120 m x 4.2 m x 0.45 m. A layer of loose gravel (4) was used to surface the top of the fire point. All deposits were then sealed below a 0.04 m thick layer of very dark grey brown silty clay topsoil (1), which contained a number of fired small arms cases.

#### *Trench 2* (Fig. 4)

- 3.1.2 Trench 2 was excavated across an undefined linear earthwork approximately 7 m south-west of Trench 1. The trench measured 16.4 m x 4 m x 0.8 m and exposed the natural clay (2) at 0.3 m below the surface. This had been cut by a land drain (9) with vertical sides and flat base. It measured 14 m x 0.2 m x 0.8 m and was filled by a dark grey silty clay (10) back filling a 0.08 m diameter CBM pipe. A cable trench (7) with vertical sides and flat base was also revealed. This measured 3.8 m x 0.2 m x 0.4 m and was filled by a grey brown clay with a 1" cable for the old range facilities. Overlying all these features and deposits was a 0.3 m thick layer of topsoil (1).

### 3.2 Finds

- 3.2.1 A fragment of modern 20th century glass was recovered from the fill (6) of the channel under the fire point bank. No further finds were retrieved during the evaluation.

### 3.3 Palaeo-environmental remains

- 3.3.1 No deposits suitable for environmental sampling were identified during the evaluation.

## 4 DISCUSSION AND CONCLUSIONS

- 4.1.1 Trench 1 revealed that the bank for the fire point was constructed using compacted clay built on a cleared strip of ground. Where the bank of the fire point crossed the rill, a small French type drain had been constructed to allow the water to flow under, presumably to prevent flooding of the immediate area.
- 4.1.2 The undefined earthwork to the south-west was found to be a natural ridge of clay on the marsh and had subsequently been cut by a land drain along the line of the rill and a service trench containing a cable used for and contemporary with the rifle range.

## APPENDICES

## APPENDIX 1 ARCHAEOLOGICAL CONTEXT INVENTORY

<i>Context</i>	<i>Type</i>	<i>Depth</i>	<i>Width</i>	<i>Length</i>	<i>Comments</i>	<i>Finds</i>
1	Layer				Topsoil	
2	Natural				Natural clay	
3	Deposit	0.45 m	4.2 m	120 m	Fire point bank	
4	Layer	0.04 m			Gravel surface of bank	
5	Structure	0.08 m	1.5 m	7 m	Drain channel under fire point	
6	Fill				Fill of drain	C20th Glass
7	Cut	0.4 m	0.2 m	3.8 m	Cable service trench	
8	Fill				Fill of trench	
9	Cut	0.8 m	0.2 m	14 m	Land drain	
10	Fill				Fill of land drain	

## APPENDIX 2 BIBLIOGRAPHY AND REFERENCES

OA 2003 *RSPB Reserve, Aveley Marsh, Essex, Archaeological Watching Brief and Recording Actions 2002* (Client report)

OA 2002 *RSPB Reserve, Aveley Marshes, Essex. Archaeological Watching Brief and Recordings Actions 2001-2002. (Phase 1. Client report)*

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

OAU 1992 *Fieldwork Manual* (ed. D Wilkinson)

## APPENDIX 3 SUMMARY OF SITE DETAILS

**Site name:** RSPB Rainham Marshes, Essex

**Site code:** RAMP 04

**Grid reference:** NGR TQ 540 800

**Type of evaluation:** Two trenches measuring 7 m x 1.5 m (Tr. 1) and 16 m x 1.5 m (Tr. 2).

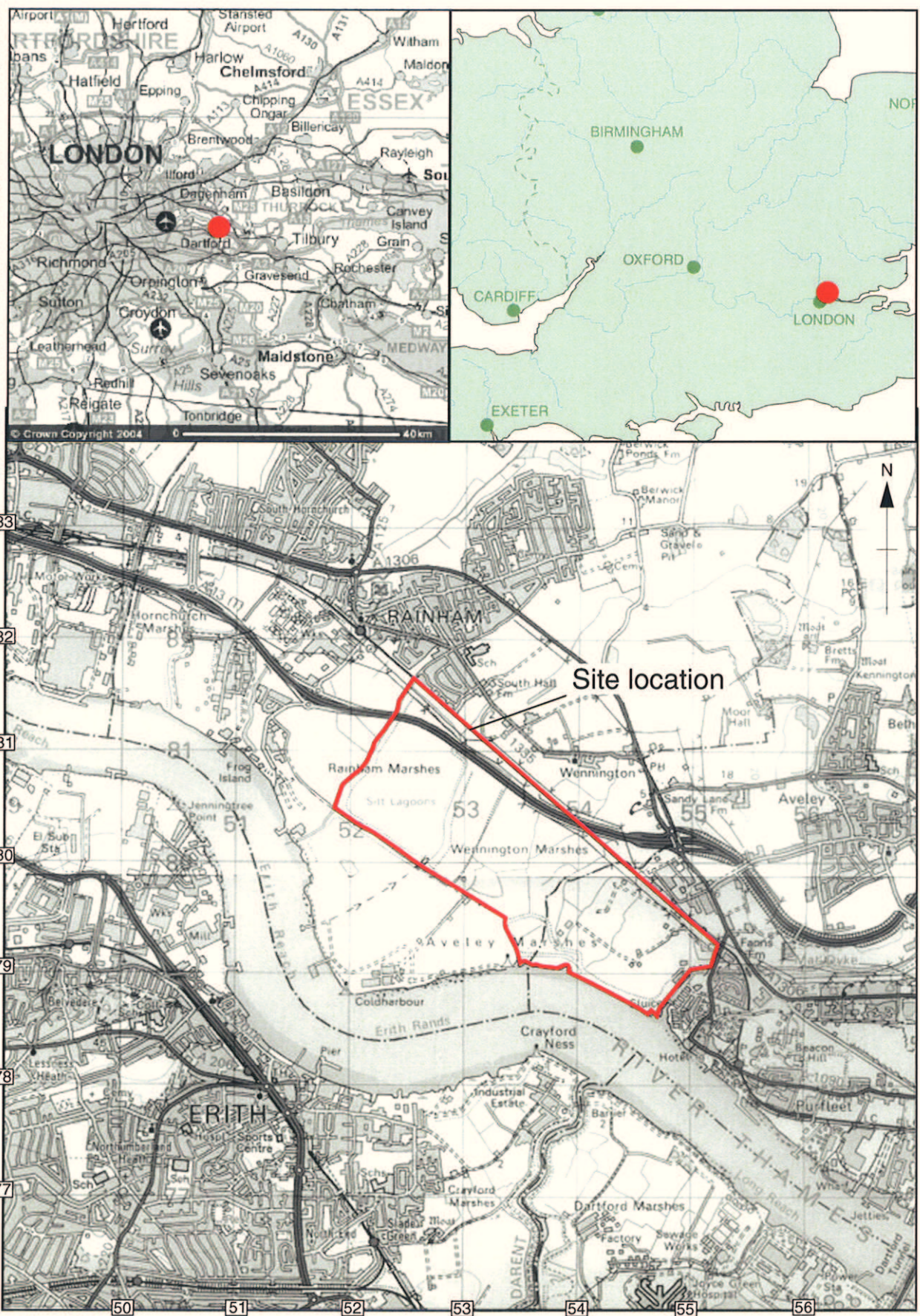
**Date and duration of project:** One day on the 9th September 2004.

**Area of site:** Approximately 200 m<sup>2</sup> area within the marsh.

**Summary of results:** Two trenches were excavated, one revealed the construction of a 20th century firing point, part of the Purfleet Rifle Range, the second was located over a ridge in the natural clay.

**Location of archive:** The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Thurrock Museum in due course.





Scale 1:50,000

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Figure 1: Site location

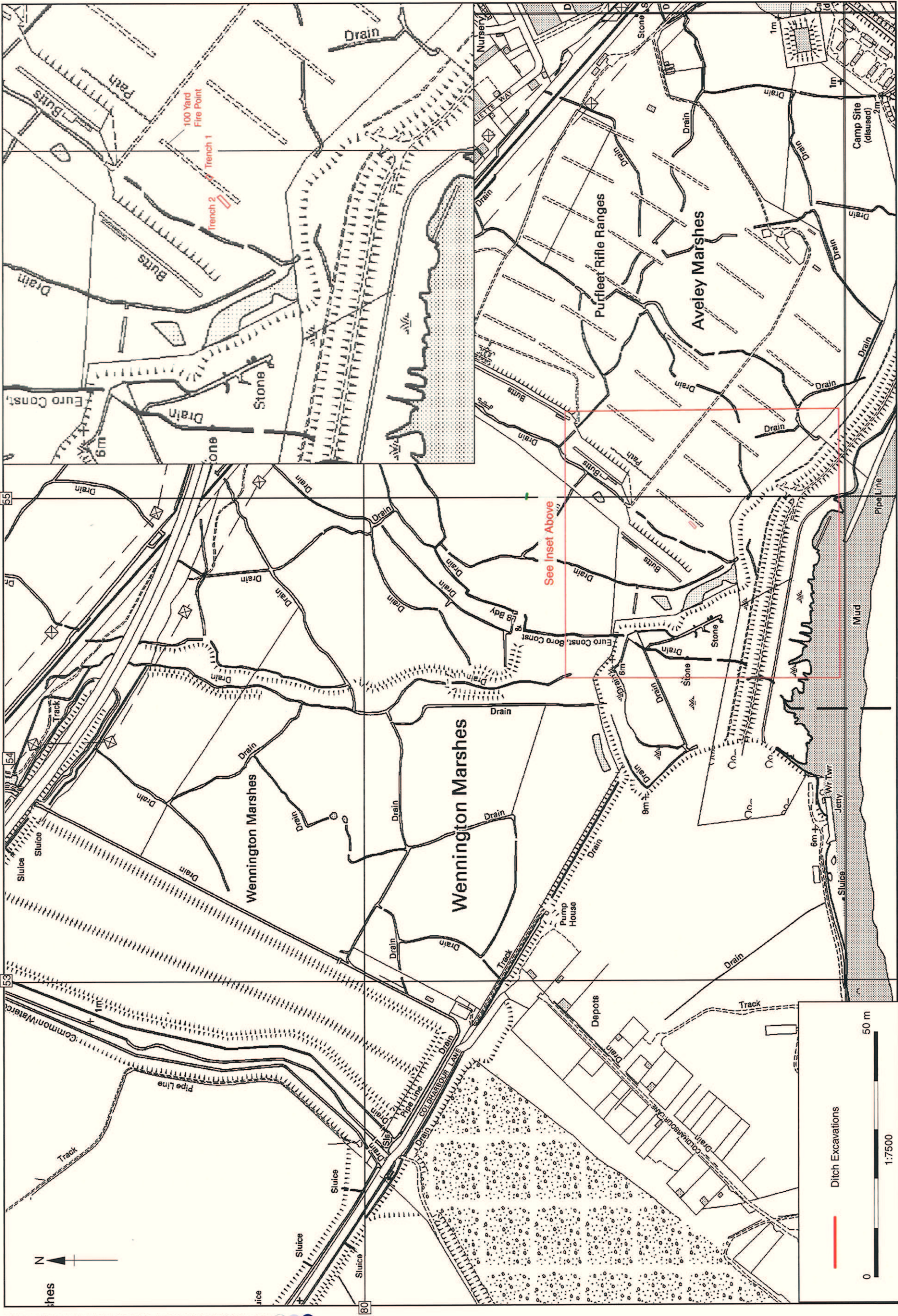


Figure 2: Location of trenches

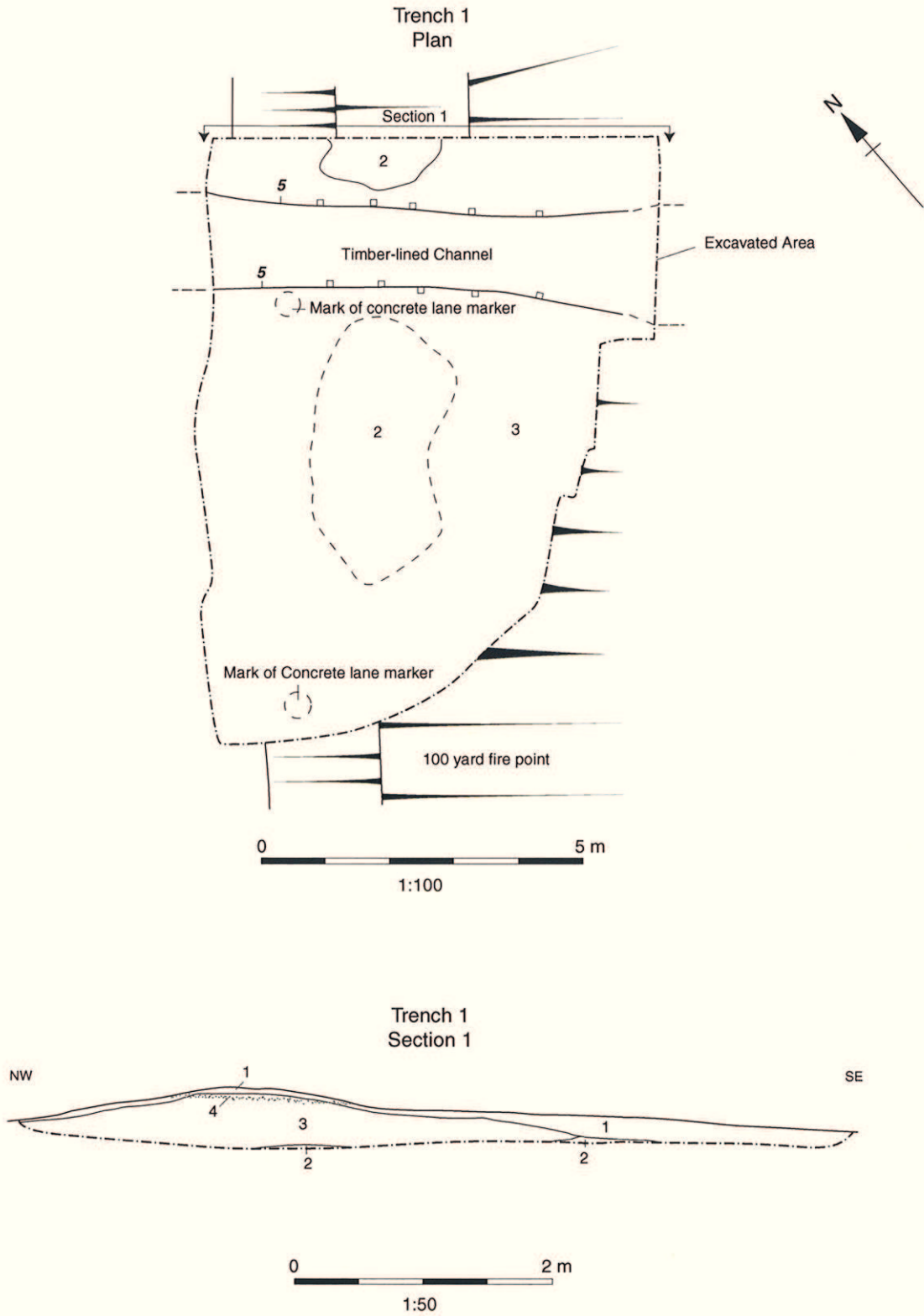


Figure 3: Trench 1, plan and sections

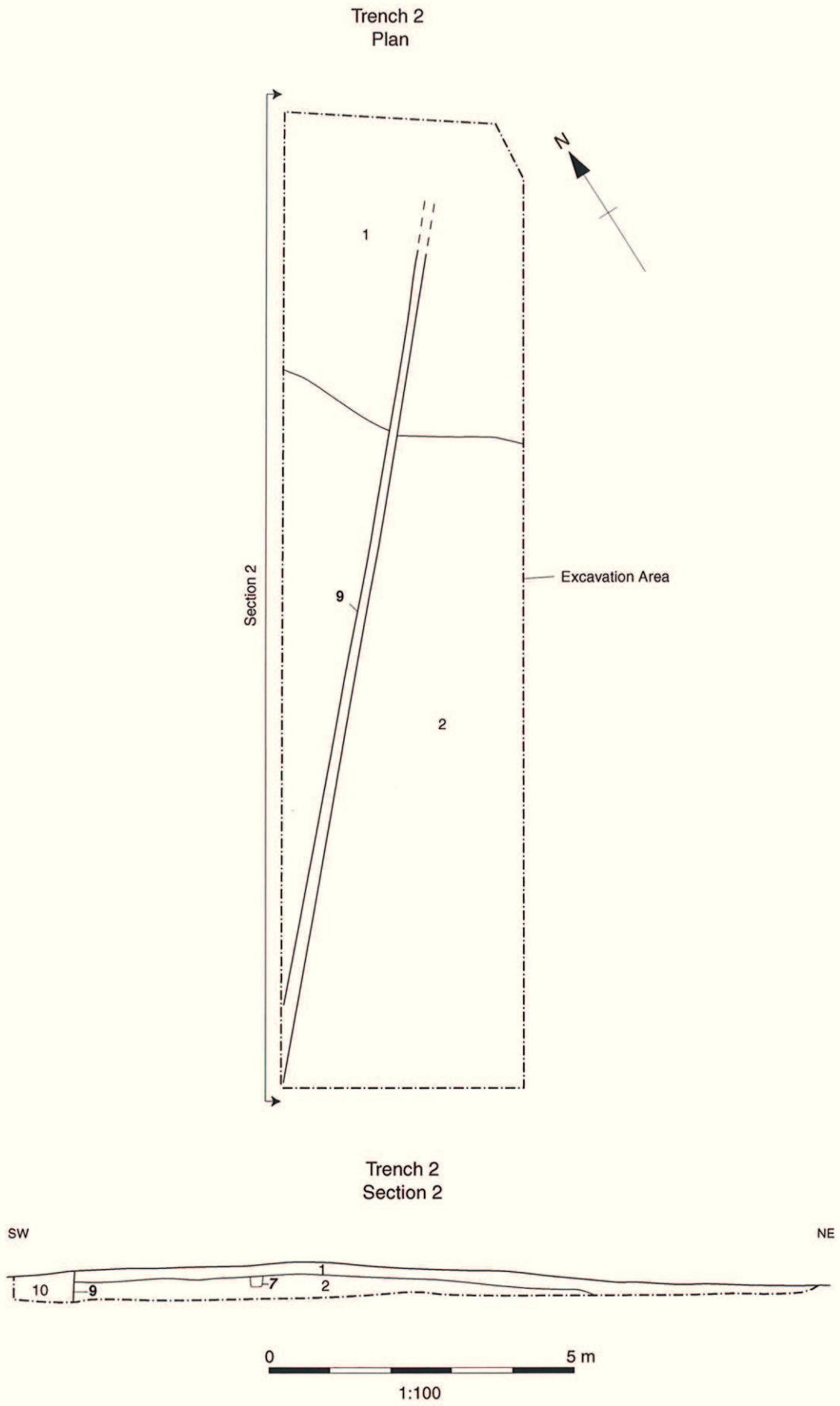


Figure 4: Trench 2, plan and sections



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