
**ANALYTICAL EARTHWORK SURVEY
OF LAND OFF
NURSERY LANE,
SOUTH WOOTTON,
NORFOLK
(ENF152518)**

Work Undertaken For
Barker Bros Builders

August 2022

Report produced by
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**ARCHAEOLOGICAL
PROJECT
SERVICES**



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1. SUMMARY

An earthwork survey was conducted at land off Nursery Lane, South Wootton in response to a proposed development.

The survey did not record the expected earthworks, perhaps due to their shallowness. However, several mounds were identified, which aerial images suggest might be mid 20th century dumps.

2. INTRODUCTION

2.1 Planning Background

Archaeological project services was commissioned by Barker Bros Builders to undertake an earthwork survey of land of Nursery Lane, South Wootton. This followed a brief by Norfolk County Council.

2.2 Topography and Geology

South Wootton lies immediately north of Kings Lynn, some 3.5km from the city's centre. The proposed development site is located 300m north of the centre of South Wootton on the northeast side of Nursery Lane at National Grid Reference TF 6418 2307.

The site lies at approximately 11m AOD on the western edge of a flat coastal plain before the village rises to the east. The bedrock geology of the area in question is Roxham Member and Runcton Member (undifferentiated) Sand (BGS 2022) without any superficial deposits.

Local soils are unmapped due to being surrounded by urban developments, however most local soils belong to the Blackwood association, typically deep permeable sandy and coarse loamy soils in glaciofluvial drift (Hodge *et al* 1984, 127).

2.3 Archaeological Setting

This document draws on information presented in a desk-based assessment produced by Parker Planning Services (2019) and a tightly focused HER search looking at sites within 500m of the site (Fig 2).

There are isolated finds of prehistoric material within 150m of the site in every direction, with some poorly dated pot boilers to the south (HER MNF25005) suggesting some settlement in the area.

Possible Roman features were revealed during an archaeological evaluation on an area 75m west of the Site (HER MNF70290).

The name Wootton derives from the Old English '*Wudu Tun*' meaning 'settlement in the woods' (Ekwall 1990, 533) and the town predates the Domesday Survey of c.1086. Saxon features have been found 50m north and west, with the late Saxon church of St Mary's 300m to the southwest.

The Domesday Survey states that before 1066 a freeman called Godwin held the parish, but that by 1086 the lands were held for King William by Godric. Numerous resources were also mentioned including a large number of sheep and some twenty salt-houses. Medieval features have been found in large numbers surrounding the site, with archaeological evidence of medieval shipping warehouses immediately west (HER 3292).

Aerial photographs of the Site show linear earthwork features which have been interpreted as 19th water management channels, possibly water meadows (HER 27924). These are not shown on historical maps. Further earthworks, similarly interpreted, are to the immediate east, along the banks of St Katherine's Creek (aka Stone's Brook). Immediately west of the field is mapped as saltmarsh in the late 18th century.

Lidar imagery of the site shows the mapped earthworks in the field clearly (Plate 1). It also depicts several mounds in the area.



Plate 1. Enhanced 2017 Lidar image of the site. Three sharply defined features are apparent that are likely to be earthworks of ditches. 50cm DTM, © Environment Agency.

3. AIMS AND OBJECTIVES

The aim of the work was to gather sufficient information for the archaeological curator to be able to formulate a policy for the management of the archaeological resources present on the site and to preserve the archaeological resource by record.

The objectives were to:

- Establish the type of archaeological activity that might be present within the site.
- Determine its likely extent, the date and function of the archaeological features present on the site, their spatial arrangement and the extent to which surrounding archaeological features extended into the application area.
- Establish the way in which any archaeological features identified fitted into the pattern

of occupation and land-use in the surrounding landscape.

4. METHODS

The survey was carried out in accordance with a Written Scheme of Investigation prepared by Archaeological Project Services and approved by Norfolk County Council. The tops and bottoms of all visible slopes in the field were recorded with a survey grade GPS and a scatter of spot heights was taken across the site. This was supplemented with a photographic record and analyses of lidar information. The survey was conducted on the 8th August 2022. The survey area was in good condition for recording having been recently mown. The photos are of limited use, given the subtlety of the features present.

5. RESULTS

The results of the survey are given on Figures 3 and 4. No ditch earthworks were visible to the eye, except the shallow ditch which is still in use (Plate 2). Several large mounds were recorded, up to 14m long, 9m wide and 2.5m high (Plate 3).

The area in which earthwork ditches had previously been recorded from aerial surveys was largely level with subtle and irregular variations (Plate 4). Readings were taken over this area and depressions of just 30mm were recorded where the earthworks had been located from aerial images.

The edge of the field was covered in dense trees and could not be surveyed.



Plate 2: General view of the site. Looking northwest. The existing ditch can be seen in the foreground.



Plate 3. Two of the mounds (C in the foreground and D behind) in the field. Looking northwest.



Plate 4. The area in which earthworks have previously been recorded. Looking northwest.

Table 1, below, summarises the identified features. The references refer to labels on figure 3:

Ref	Type	Length	Width	Relative Height/depth	Interpretation and notes
A	Ditch	134m	5.44m	-0.67m	Currently functioning drainage ditch. Not shown on mid 19 th century tithe map, first shown on 1888 Ordnance Survey map.
B	Mound	4.9m	4.2m	2.24m	Modern dump?
C	Mound	12.88m	9.21m	0.81m	Modern dump?
D	Mound	11.23m	8.54m	0.66m	Modern dump?
E	Mound	11.51m	8.27m	0.43m	Modern dump? Irregular in shape.
F	Mound	14.3m	9.12m	2.52m	Modern dump?

6. DISCUSSION

The absence of ditch earthworks visible to the naked eye implies that either the area has been heavily disturbed since lidar images were last published of the site in 2019, or the features are too subtle to be detected at eye level. This later interpretation is implied by readings which show just a 30mm drop over 2m horizontally. However, a site visit by Parker Planning Services in 2019 (5.7; H328) noted that the field was being used for horse paddocking and was being driven on by vehicles, both with the potential to erode surface features. The linear depressions have previously been identified as 19th century water management channels, and in the HER they are grouped together with water meadow earthworks to the east. While the earthworks in the field immediately east (Plate 5) are of a classic water meadow form, having an inlet and outlet, and dividing the field into narrow strips which are easily kept damp (UOB 2008, Historic England 2018) this cannot be said for the identified earthworks under investigation, which form broader fields and are not obviously part of a flowing network. Therefore, their function is a more open to question, with drainage being the most likely option. It is not known on what criteria a 19th century date was assigned to these features in the HER record; on form alone no date is obviously suggested.



Plate 5. Mapped water meadows immediately east of the site. © Historic England 2022

The mounds in the field have not previously been mapped. They are apparent on lidar images from 2017. They are potentially visible on aerial images from 1988 (Plate 6), but not obviously on a photo from 1967 or 1945 (Plate 7), suggesting they might be late 20th dumps of material.



Plate 6. A 1988 image of the site. The mounds in the field are suggested by dark green patches in the locations identified by the survey. Reproduced from Norfolk Historical Map Explorer, © Norfolk County Council.



Plate 7. A 1945 aerial image of the site. © Google Earth.

7. CONCLUSIONS

An earthwork survey east of Nursery Lane failed to identify four earthwork depressions, previously known from aerial images and lidar, potentially due to the shallowness of the features. An analysis of form based on the previously published data suggested that these were not water meadows, but probably served a drainage function. No date could be suggested on form alone, although a 19th century date has previously been assigned to the features.

Five substantial mounds were identified which had previously not been mapped. Analysis of aerial images suggests these might be mid 20th century soil dumps, although this cannot be stated with any certainty.

8. ACKNOWLEDGEMENTS

Archaeological Project Services wishes to acknowledge Barker Bros Builders for commissioning the fieldwork and analysis. The work was coordinated by Paul Cope-Faulkner who edited this report.

9. PERSONNEL

Project Coordinator: Paul Cope-Faulkner
Surveyors: Sean Parker and Francesca Lam-March
Photographic reproduction: Jonathon Smith
CAD Illustration: Jonathon Smith
Analysis: Jonathon Smith

10. BIBLIOGRAPHY

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Hodge, CAH, Burton, RGO, Corbett, WM, Evans, R, and Seale, RS, 1984 *Soils and their use in Eastern England, Soil Survey of England and Wales 13*

Parker Planning Services, 2019 *Land off Nursery Lane, South Wootton, Norfolk: Assessment of HELAA Sites: H327 and H328*. Unpublished

UOB, 2008 *Recognising Water Meadows*.

11. ABBREVIATIONS

AOD Above Ordnance Datum
APS Archaeological Project Services
BGS British Geological Survey
UOB University of Birmingham



Figure 1 - General location plan

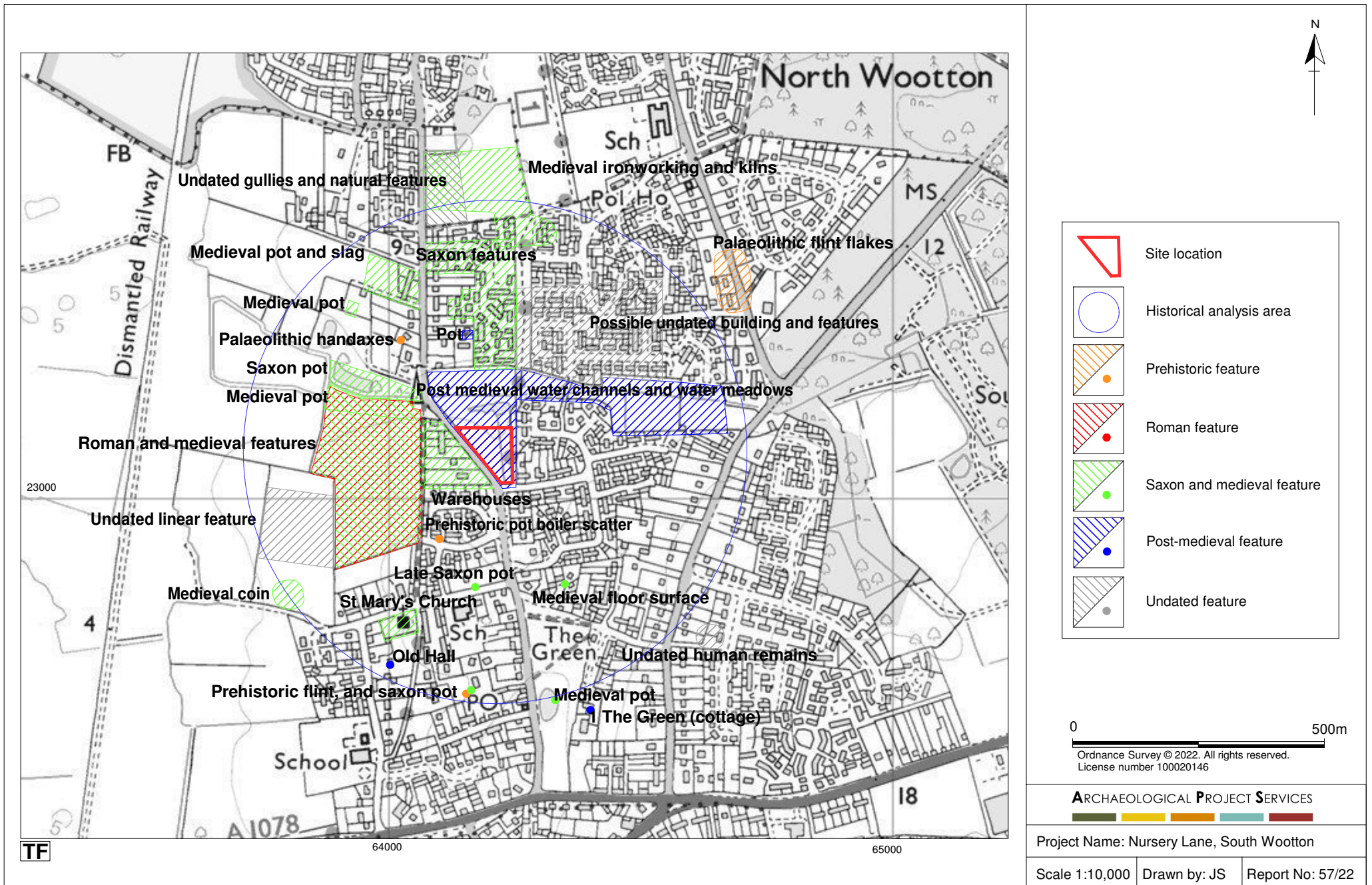


Figure 2 - Site location and historical context

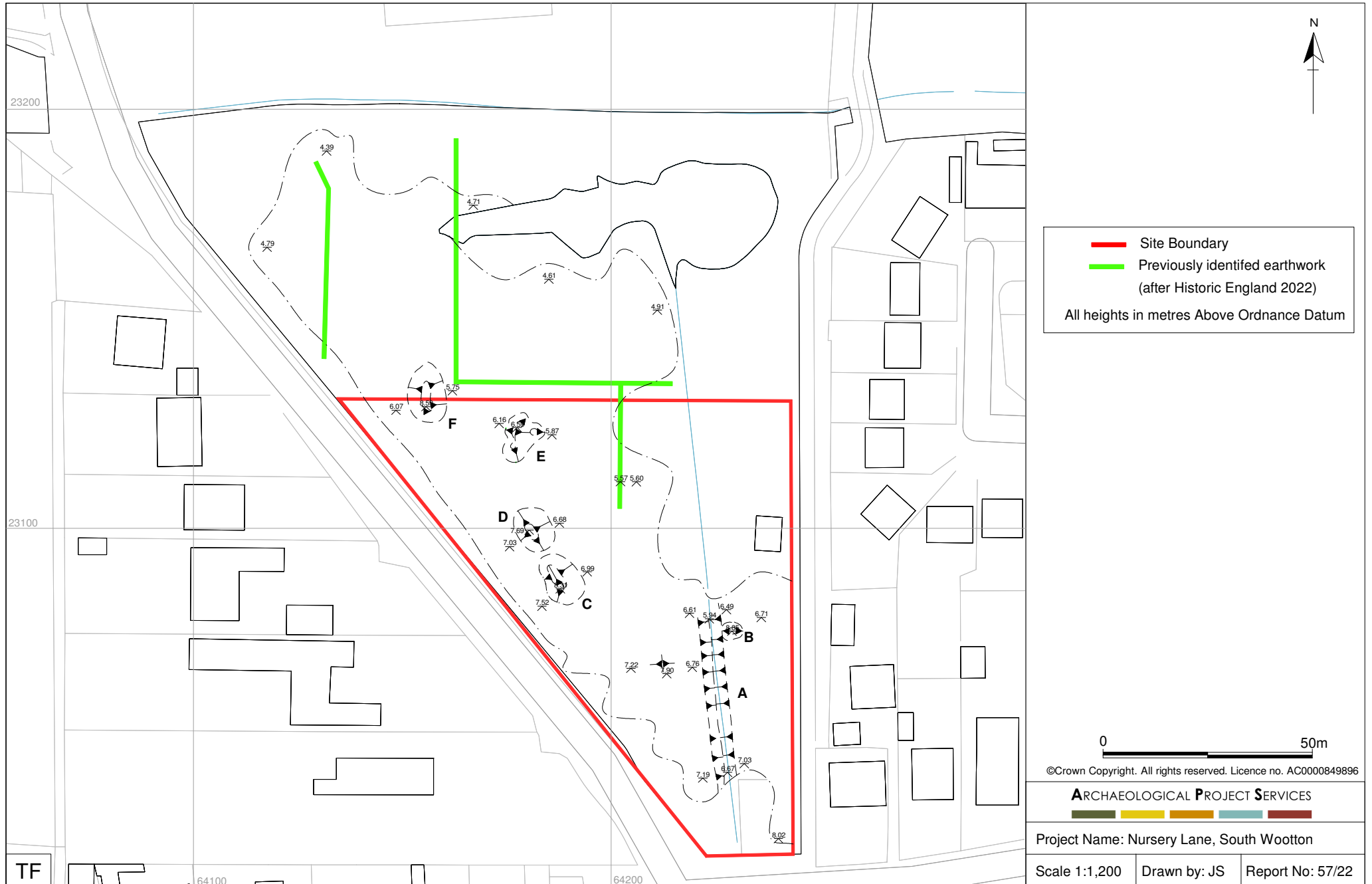


Figure 3 - Earthwork Survey

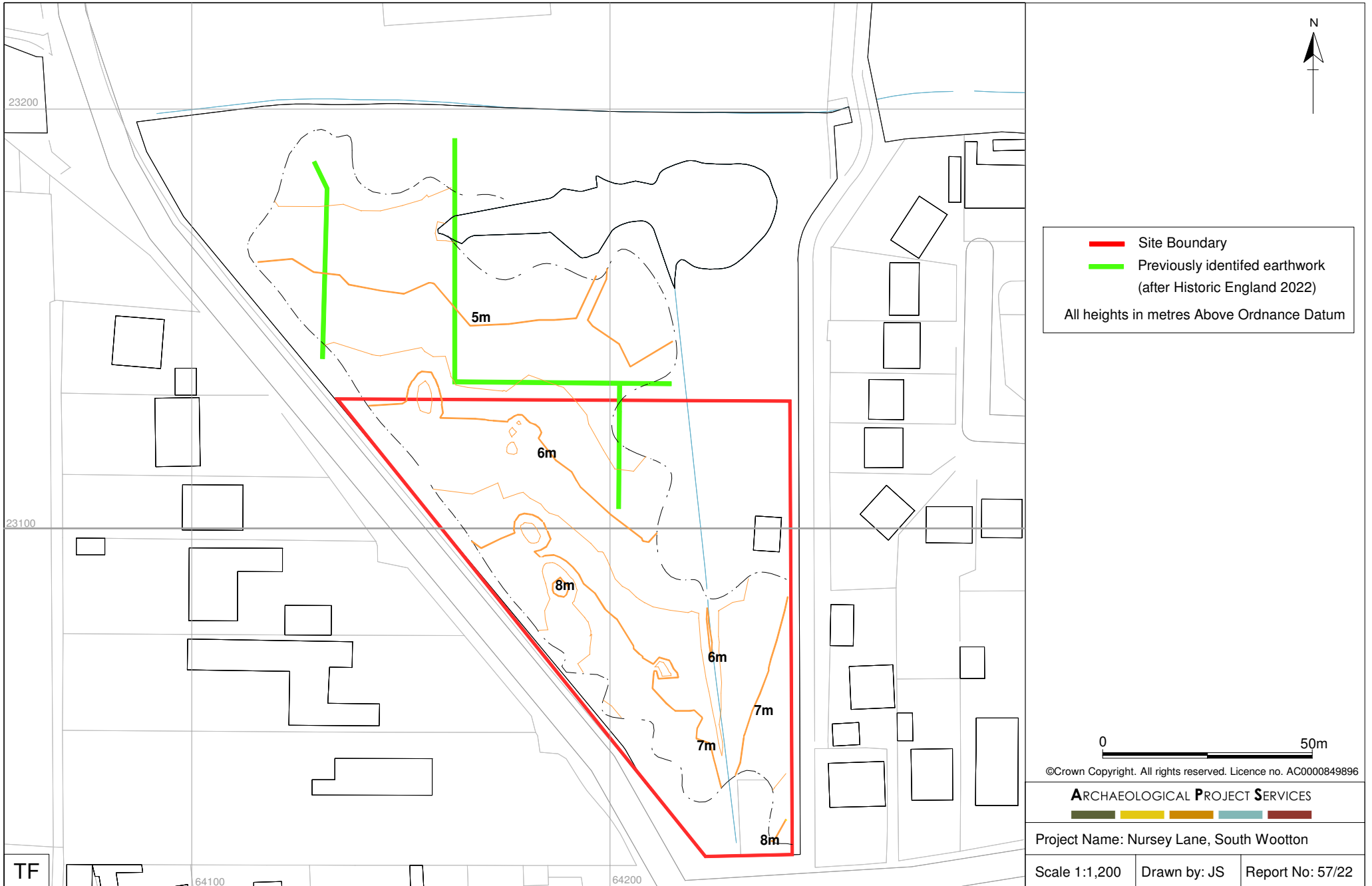


Figure 4 - Contours

Appendix 1

GLOSSARY

Bronze Age	A period characterised by the introduction of bronze into the country for tools, between 2400 and 800 BC.
Cropmark	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
Domesday Survey	A survey of property ownership in England compiled on the instruction of William I for taxation purposes in 1086 AD.
Drift	Material that has been eroded, transported or deposited by glaciers (or their melt water). The term 'drift' is commonly used to describe any deposits of Quaternary age.
Iron Age	A period characterised by the introduction of Iron into the country for tools, between 800 BC and AD 50.
Lidar	An aircraft-based method of survey using analysis of pulses of laser light reflected from the surfaces of the ground and buildings. It is cable of identifying subtle differences in topography.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Modern	The current period, dating from around AD 1900 to the present time.
Neolithic	The 'New Stone Age' period, part of the prehistoric era, dating from approximately 4500 - 2400 BC.
Old English	The language used by the Saxon (<i>q.v.</i>) occupants of Britain.
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1900.
Prehistoric	The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD.
Roman	Pertaining to the period dating from AD 43-410 when the Romans occupied Britain.
Saxon	Pertaining to the period dating from AD 410-1066 when England was largely settled by tribes from northern Germany, Denmark and adjacent areas.
Water Meadow	An area of pasture kept artificially damp to prevent frosts in winter and provide moisture in summer.

Appendix 2

THE ARCHIVE

The archive consists of:

A collection of digital photographs
GPS data

All primary records are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

Norwich Castle Museum
Castle Meadow
Norwich
Norfolk
NR1 3JU

Norfolk Historic Environment Event Number: ENF152518

Museum Accession No: NWHCM:2022.239

Archaeological Project Services Site Code: SWNL22

OASIS Record No: archaeo11-508386

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the development site but away from the areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.

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Appendix 3

OASIS SUMMARY

OASIS ID (UID)	archaeol1-508386
Project Name	ARCHAEOLOGICAL EARTHWORK RECORDING ON LAND OFF NURSERY LANE, SOUTH WOOTTON, NORFOLK
Sitename	Nursery Lane, South Wootton
Activity type	Analytical Earthwork Survey
Project Identifier(s)	Earthwork Survey: Nursey Lane, South Wootton
Planning Id	
Reason For Investigation	Planning: Between application and determination
Organisation Responsible for work	Archaeological Project Services
Project Dates	08-Aug-2022 - 08-Aug-2022
Location	Nursery Lane, South Wootton NGR : TF 64180 23070 LL : 52.7802456473679, 0.432760380890559 12 Fig : 564180,323070
Administrative Areas	Country : England County : Norfolk District : King's Lynn and West Norfolk Parish : South Wootton
Project Methodology	A survey grade GPS was used to record earthworks at the site. This was supplemented with lidar images, aerial photographs and groundbased photographs.
Project Results	Four formerly recorded earthwork ditches could not be identified during the survey. Five large mounds were recorded but aerial images suggest they were mid 20th century in date.
Keywords	
Funder	
HER	Norfolk HER - unRev - STANDARD
Person Responsible for work	J, Smith
HER Identifiers	HER Event No - ENF152518
Archives	Digital Archive - to be deposited with Norfolk Museums Service; Accession Id(s): NWHCM:2022.239