

ARCHAEOLOGICAL EVALUATION REPORT:
TRIAL TRENCHING AND GEOARCHAEOLOGICAL TEST PITTING
ON LAND OFF MEADOW WAY, SPALDING, LINCOLNSHIRE (PHASE 1)

Planning Reference: Pre-application
NGR: TF 23679 21542
AAL Site Code: SPCM 25
Museum Accession Number: LCNCC:2025.202
OASIS Reference Number: allenarc1-539522



Report prepared for Tetra Tech Consulting Ltd
On behalf of Broadgate Homes

By
Allen Archaeology Ltd
Report Number AAL 2026006

September 2026



Allenarchaeology



Contents

Executive Summary	1
1.0 Introduction.....	2
2.0 Site Location and Description.....	2
3.0 Planning Background.....	2
4.0 Archaeological and Historical Background.....	3
5.0 Aims and Objectives	4
6.0 Methodology	4
Trial Trenching.....	4
7.0 Results	5
Trench 1 (Figure 3).....	6
Trench 2 (Figure 3 and Figure 9).....	6
Trench 3 (Figure 4).....	7
Trenches 4 – 6, 8 and 9 (Figure 4 – 6 and Figure 9).....	8
Trench 11 (Figure 7)	11
Trench 12 (Figure 8)	13
Trench 13 (Figure 3)	13
Trench 14 (Figure 3)	13
Trench 15 and 16 (Figure 3).....	13
8.0 Discussion and conclusion.....	14
9.0 Effectiveness of Methodology.....	15
10.0 Acknowledgements	15
11.0 References.....	15

List of Plates

Plate 1: Geophysical anomaly at west end of Trench 1, looking northwest. Note modern wiring .	6
Plate 2: Southeast-facing section of ditch 204 , looking northwest, scale 1m and 1m	7
Plate 3: Northeast-facing section of paleochannel 404 , looking southwest, scale 2m.....	9
Plate 4: Northeast-facing section of paleochannel 504 , looking southwest, scales 1m and 1m	9
Plate 5: Oblique shot of paleochannel 604 , looking northwest	10
Plate 6: Oblique shot of paleochannel 805 , looking south, scales 1m & 1m	10
Plate 7: Northeast-facing section of paleochannel 904 , looking southwest, scales 2m	11
Plate 8: Oblique shot of paleochannel 1106 , looking southwest.....	11
Plate 9: Southeast facing section of modern feature 1104 , looking northwest, scales 1m.....	12
Plate 10: Peat deposit 1102, looking northwest, scales 1m.....	12
Plate 11: Modern truncation 1304, looking southwest	13
Plate 12: Structure 1507, looking east, scales 1m and 0.5.....	14

List of Appendices

Appendix 1: Context Summary	17
Appendix 2: Figures	18
Appendix 3: OASIS Summary	29
Appendix 4: Geoarchaeological Report	30

List of Tables

Table 1: Summary of feature types in each trench	6
--	---

List of Figures

Figure 1: Site location outlined in red	18
Figure 2: Trench location plan superimposed over geophysical interpretation (Magnitude Surveys 2025).....	19
Figure 3: Plan of Trenches 1, 2, 4, & 13	20
Figure 4: Plan of Trenches 3 & 4	21
Figure 5: Plan of Trenches 5, 6 & 7	22
Figure 6: Plan of Trenches 8, 9, 10 & 11	23
Figure 7: Plan of Trenches 9, 10 & 11	24
Figure 8: Plan of Trench 12	25
Figure 9: Plan of Trenches 14, 15 & 16	26
Figure 10: Sections 1-3	27
Figure 11: Section and Plan Trench 15	28

Document Control

Element:	Name:	Date:
Report prepared by:	Emily Danielsson BA (Hons)	15/01/2026
Illustrations prepared by:	Emily Danielsson BA (Hons)	05/01/2026
Report edited by:	Mark Allen BSc (Hons) MCIfA	15/01/2026
Report reviewed by:	Joshua T. Hogue BSc (Hons) MSc DPhil	19/01/2026
Version no.:	1.0	19/01/2026
Comments by:	Simon Mortimer MA MCIfA	23/01/2026
Report revised by:	Emily Danielsson BA (Hons)	13/02/2026
Version no.:	1.1	19/02/2026
Report revised by:	Jack McDonald BSc (Hons)	01/09/2026
Version no.:	1.2	01/09/2026

Cover image: General shot of backfilled trenches, looking southeast

Executive Summary

- Tetra Tech, on behalf of Broadgate Homes, commissioned Allen Archaeology Ltd to undertake an archaeological evaluation by trial trenching on land off Meadow Way, Spalding, Lincolnshire as part of pre-application works for Phase 1 of a proposed residential development.
- The site lies within a dynamic landscape that has seen, throughout prehistory, marine inundations and freshwater pooling, resulting in silt deposition and peat formation. The landscape comprised open water and fen, interspersed by islands of higher, dryer ground that were a focus of occupation. There is no evidence for early prehistoric activity in the surrounding area. For later Iron Age and Roman activity there are multiple sites that have revealed evidence of salt production and settlement activity. There is no evidence for early medieval activity in the vicinity of site, as it is situated some distance to the historic core of Spalding, a moat and grange to the northwest being the nearest form of medieval activity. In more recent history the line of the Midland and Great Northern joint railway, which was operational by 1866, is shown to cross the northern half of the site. It was closed by 1965 and has been dismantled.
- The site has previously been subject to several previous archaeological investigations, including a site visit and subsequent evaluation trenching by John Samuels Archaeological Consultants in 2000. Most of the trenches were off site, although two on site (near the eastern and southwestern site boundaries) identified paleochannels of unknown date and marine flooding episodes. A geophysical survey by Magnitude Surveys was undertaken for the proposed development. It identified mapped field boundaries, as well as a possible former drainage dyke.
- The trial trenching methodology initially entailed the excavation of 12 trenches comprising 10no 50m x 1.8m trenches and 2no 25m x 1.8m trenches, with an additional trench included following on site discussions with the advising Historic Environment Officer. A programme of geoarchaeological investigation was also undertaken, comprising nine geoarchaeological test pits. A further two 50m x 1.8m trenches, with one split into a 30m and a 20m separate trench, were opened at the direction of the Historic Environment Officer to ensure adequate coverage of the whole proposed development site.
- The initial trenching did not identify any archaeological deposits of significance. A palaeochannel was noted running northeast to southwest through the site and was found to cut a lower sequence of roddon deposits that were laid down in the mid-2nd millennium BC. The lowermost fill of the former channel contained Nordelph peat and was filled and sealed by later Holocene roddon deposits. The additional three trial trenches identified a single wooden structure, possibly a fence line or small outbuilding associated with the former railway embankment that crossed the site. Modern made ground and cut features were noted at the northern and southern ends of the site.
- In summary, the evaluation indicates that the potential for significant archaeological remains within the site is negligible.

1.0 Introduction

- 1.1 Tetra Tech commissioned Allen Archaeology Ltd to undertake an archaeological evaluation by trial trenching on land off Meadow Way, Spalding, Lincolnshire as part of pre-determination works for Phase 1 of a proposed residential development.
- 1.2 The fieldwork, recording and reporting was carried out in a manner consistent with current national guidelines, as set out in the Chartered Institute for Archaeologists '*Standard for archaeological field evaluation*' (CIfA 2020a) '*Universal guidance for archaeological field evaluation*' (CIfA 2023b), '*Standard for archaeological monitoring and recording*' (CIfA 2020c) '*Universal guidance for archaeological monitoring and recording*' (CIfA 2023d), and the Historic England document '*Management of Research Projects in the Historic Environment*' (Historic England 2015a) as well as local guidance in the '*Lincolnshire Archaeological Handbook*' (LCC 2024). A written scheme of investigation (WSI) was also produced by this company (AAL 2025).
- 1.3 The documentary and physical archive generated has been assembled in accordance with the national guidelines in '*Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation*' (AAF 2011) and the local guidelines in '*Lincolnshire Archaeological Handbook*' (LCC 2024). The archive will be deposited with Lincoln Museum, where it will be stored under the museum accession code LCNCC:2025.202. The agreed date of deposition is October 2026.

2.0 Site Location and Description

- 2.1 The market town of Spalding is in the administrative district of South Holland, approximately 56km southeast of central Lincoln, Lincolnshire. The proposed development area is at the southwestern edge of the town, west of Hawthorn Bank and is currently a mix of open pasture and an industrial park, with a large spoil heap in the southeast corner. It is centred at National Grid Reference (NGR) TF 23679 21542 and is at a height of approximately 4m above Ordnance Datum (Figure 1).
- 2.2 The bedrock geology comprises Oxford Clay formation mudstone, overlain by superficial tidal flats deposits of clay and silt (www.mapapps.bgs.ac.uk/geologyofbritain/home.html).

3.0 Planning Background

- 3.1 These works were undertaken prior to the determination of a planning application for a residential development. The Historic Environment Officer at Lincolnshire County Council, advising South Holland District Council agreed a programme of archaeological evaluation by trial trenching and geoarchaeological investigation with the consultant, Tetra Tech, to provide information to allow the planning authority to make a reasoned decision as to whether any further intrusive investigations will be required to mitigate the effects of the proposed development upon the archaeological resource, either prior to or following determination of the proposed application.
- 3.2 The approach adopted is consistent with the recommendations of the National Planning Policy Framework (NPPF), with the chapter of relevance being '*Chapter 12: Conserving and enhancing the historic environment*' (Department for Levelling Up, Housing and Communities 2023).

4.0 Archaeological and Historical Background

- 4.1 An archaeological desk-based assessment has previously been prepared for the scheme (Tetra Tech 2025) and is summarised below.
- 4.2 The site lies within a dynamic landscape that has seen, throughout prehistory, marine inundations and freshwater pooling, resulting in silt deposition and peat formation. The landscape comprised open water and fen, interspersed by islands of higher, dryer ground that were a focus of occupation. There is no evidence for early prehistoric activity in the surrounding area, and it is possible any evidence is sealed at depth.
- 4.3 There is evidence for later Iron Age and Roman activity, especially associated with salt production, where brackish tidal water was settled in tanks before boiling in fired clay trays to extract the salt. The residue silt and ash, along with fragments from the trays and pedestals (briquetage) were then dumped, creating silt mounds, or salterns, that are often still visible today. The closest evidence for this is c.200m to the west of the site (Lincolnshire Historic Environment Record reference (LHER) MLI20553), where several roundhouse drip gullies also suggested it was settled. Further late Iron Age and Roman saltmaking activity has been identified c.250m to the southwest (LHER MLI89349), c.400m to the northwest (LHER MLI22638) and c.550 to the west of the site (LHER MLI23204).
- 4.4 Roman settlement is noted in the surrounding landscape, attesting to an increase in activity at the time, likely in part due to lower water levels than during the Iron Age (Coles and Hall 1998, 49). The nearest known settlement activity is c.70m to the west of the site (LHER MLI81540); this is recorded as being a probable Romano-British farmstead; however, it is more likely to be associated with the salt making industry.
- 4.5 There is no evidence for any early medieval activity in the vicinity of the site. Spalding is believed to have been a Royal Estate in the Saxon period and the placename, first mentioned in c.1074, is an Old English group-name, *Spaldingas*, meaning ‘the people of the Spalde’ (Cameron 1998). The tribal name Spalde is recorded in the 7th/8th century tribute list called the Tribal Hidage (*ibid.*). At the time of the Domesday Book in 1086, the principal landowner was Ivo Tallboys, with smaller estates owned by Crowland Abbey and 8 Guy of Craon. In total, Spalding was populated by 91 villagers and their dependents, and included a market, fisheries, and salt houses (Morgan and Thorn 1986). The site lies some distance to the west of the historic core of the settlement.
- 4.6 A moat and a grange (LHER MLI22356 and MLI94282), c.550m to the northwest, is the nearest known activity of medieval date to the site.
- 4.7 The line of the Midland and Great Northern joint railway (MLI20288) which was operational by 1866 is shown to cross the northern half of the site. It was closed by 1965 and has been dismantled, with no surviving above ground evidence for the railway across the site.
- 4.8 The site has been subjected to several previous archaeological investigations, including a site visit (LHER ELI2391) and subsequent evaluation trenching (LHER ELI2690). Most of the trenches were off site, although two on site (near the eastern and southwestern site boundaries) identified palaeochannels of unknown date and marine flooding episodes.
- 4.9 A geophysical survey was undertaken for this proposed development (Taylor 2025). The survey identified mapped field boundaries, as well as a possible former drainage dyke.

5.0 Aims and Objectives

- 5.1 The purpose of the trial trench evaluation was to gather sufficient information for the archaeological consultant, Tetra Tech, and the advising Historic Environment Officer to be able to formulate a policy for the management of the archaeological resources present on the site.
- 5.2 Evidence was gathered to establish the presence/absence, nature, date, depth, quality of survival and importance of any archaeological deposits to enable an assessment of the potential and significance of the archaeological remains, and to assess the impact of the development upon the archaeology.

6.0 Methodology

Trial Trenching

- 6.1 A programme of trial trenching was undertaken, equivalent to approximately 3% of the total development area, originally comprising 12 trenches comprising 10 no 50m x 1.8m and 2no 25m x 1.8m trenches (Figure 2). An additional contingency trench measuring 5m x 1.8m was required by the advising Historic Environment Officer to confirm the results in Trench 1. The fieldwork was undertaken on the 24th – 28th November 2025, by a team of experienced field archaeologists supervised by Connor Toghill of Allen Archaeology Ltd.
- 6.2 Two additional trenches were requested by the Historic Environment Officer once these initial works were complete to ensure the requisite coverage of the proposed development site during the trial trenching phase of works. 2no 50m x 1.8m trenches were proposed but due to site constraints 1no 50m, 1no 30m and 1no 20m trench were excavated instead, on the western edge of the proposed development site (Figure 2). This fieldwork was undertaken on the 10th – 13th August 2026, by a team of experienced archaeologists supervised by Thomas Baslington of Allen Archaeology Ltd.
- 6.3 In each trench all topsoil, subsoil and underlying non-archaeological deposits were removed by mechanical excavator fitted with a toothless bucket. This was undertaken in spits of 0.1m thickness until the first archaeological horizon or natural geology was exposed, whichever was encountered first. Deep slots (sondages) were excavated at the end of some of the trenches by mechanical excavator to obtain a greater understanding of the below ground deposits as part of the geoarchaeological assessment (Appendix 4). The trenches (excluding geoarchaeological test pits) were excavated to a maximum safe working depth, beyond this or when required provision following the current H&S regulations were made for safe excavation.
- 6.4 The evaluation trenches were accurately located using survey data obtained from a GNSS rover to an accuracy of 0.05m or better, in relation to the Ordnance Survey Grid and were positioned as specified in the WSI (AAL 2025).
- 6.5 In the event of positive results in the excavated trenches, features were investigated unless otherwise agreed between Tetra Tech and the advising Historic Environment Officer. It was not anticipated that the complete excavation of features was necessary at this stage. The excavation of features was based on methodology within the WSI:
 - minimum 1m wide slots through linear features where possible.

- 50% sample of discrete features, e.g., pits or postholes.
 - Intersecting features will be investigated to determine the relationship between them.
 - As a minimum 1-metre-wide representative section were cleaned and recorded in each trench.
 - Machine assistance was required (with the advice of Tetra Tech and approval of the Historic Environment Officer) for the excavation of very large/deep features, e.g. palaeochannels.
- 6.6 A full written record of the archaeological deposits was made on standard Allen Archaeology Limited context recording sheets. Archaeological deposits were drawn to scale, in plan and section (at scale 1:20 or 1:50), with Ordnance Datum heights being displayed on each class of drawing. Hand draw plans were supplemented with survey data gathered using a survey grade GPS.
- 6.7 Digital photography (using camera with a minimum 12MP APS-C sensor or larger) formed an integral part of the recording strategy, with photographs incorporating scales, an identification board and directional arrow, where appropriate. General site shots were also taken to show working conditions.

7.0 Results

- 7.1 In general, the soil profile across the site was fairly consistent. LIDAR data of the area shows that the site is set within a wider landscape covered in a sinuous system of silted up roddons (Appendix 4, figures 3-5). Two broad phases of roddon deposits were encountered in each of the trenches excavated to 1.20m deep and supplemented by the geotechnical pits excavated to 3.00m-3.50m deep towards the end of eight trenches (Trench 1, 3, 4, 5, 6, 9, 10 and 12), along with a second test pit excavated to the northwest of Trench 3.
- 7.2 The soil profile comprised a 0.25–0.45m thick topsoil overlaying an upper roddon deposit, comprising a mid yellowish silt, measuring between 0.20–0.45m thick. This was overlain with a thin layer of peat measuring between 0.02-0.10m thick; within Trenches 4, 6 and 11 it occurred in patches, whereas it was more consistent throughout the remaining trenches. The peat layer sealed a lower roddon deposit, comprising a bluish grey silty clay, measuring up to 1.00m thick, as exposed within the geoarchaeological test pits (Appendix 4).

Trench No.	No. of Modern Features	No. of Palaeochannels	No. of Archaeological Features
1	1	-	-
2	1	1	-
3	1	-	-
4	-	1	-
5	-	1	-
6	-	1	-
7	-	-	-
8	-	1	-
9	-	1	-
10	-	-	-
11	1	1	-
12	1	-	-

Trench No.	No. of Modern Features	No. of Palaeochannels	No. of Archaeological Features
13	1	-	-
14	-	-	-
15	-	-	1
16	-	-	-

Table 1: Summary of feature types in each trench

Trench 1 (Figure 3)

- 7.3 Trench 1 was located to investigate an intermittent northwest – southeast oriented pit- like anomaly, this corresponded to feature **106**. The pit-like feature, **106**, had steep straight sides that cut through the upper roddon deposit 101. It contained backfilled deposits 105 and 104 (respectively) that contained modern refuse including wire, rubber and potential asbestos.



Plate 1: Geophysical anomaly at west end of Trench 1, looking northwest. Note modern wiring

Trench 2 (Figure 3 and Figure 9: Plan of Trenches 14, 15 & 16)

Figure 10)

- 7.4 Trench 2 was located to investigate a northeast – southwest oriented linear, and two possible curvilinear geophysical anomalies. A palaeochannel **204** and modern linear feature **208** was exposed.
- 7.5 Palaeochannel **204** was northwest – southeast aligned and did not appear in the previous geophysical survey. The channel cut into the lower roddon deposit 203 and had moderately steep straight sides that tapered to a concave base. The lowermost deposit was a shallow peat 202 sealed by upper roddon deposit 201 that extend across the trench. The roddon deposit was overlain by a natural silting deposit, 206, that was in turn sealed by a subsoil 207 then the topsoil 200. None of the deposits yielded any finds.



*Plate 2: Southeast-facing section of ditch **204**, looking northwest, scale 1m and 1m*

- 7.6 A northeast – southwest aligned linear feature **208**, which broadly correlated with a linear geophysical anomaly, was exposed at the southern end of the trench. It was backfilled with deposit 209 that contained modern refuse including concrete and a wooden fence post. This feature likely represents a former field boundary that ran parallel with the former railway line that ran across the northern half of the site (Tetra Tech 2025). The feature was not excavated.

Trench 3 (Figure 4)

- 7.7 Trench 3 was centred across a curvilinear geophysical anomaly; however, no archaeological deposits were exposed in this location. A second linear anomaly, northwest – southeast oriented, was also targeted at the northern end of the trench corresponding with feature **307**.
- 7.8 At the northern end of the trench, situated below the topsoil, over 1.2m of made ground 301, 305, and 306 (listed in stratigraphic order from latest to earliest) were exposed, all contained modern refuse such as concrete. A linear feature **307** was noted at the base of this sequence. This was backfilled with modern refuse including a painted fencepost and was left unexcavated due to the depth and modern nature of the feature.

Trenches 4 – 6, 8 and 9 (Figure 4 – 6 and Figure 9: Plan of Trenches 14, 15 & 16

Figure 10)

- 7.9 Trenches 4 – 6, 8 and 9 were positioned across a broadly northeast – southwest geophysical anomaly that was identified as a palaeochannel within the trenching. A slot was hand excavated through the former channel in Trenches 4, 5, 8 and 9, with a machine slot through the feature in Trench 6.



*Plate 3: Northeast-facing section of paleochannel **404**, looking southwest, scale 2m*



*Plate 4: Northeast-facing section of paleochannel **504**, looking southwest, scales 1m and 1m*



*Plate 5: Oblique shot of paleochannel **604**, looking northwest*



*Plate 6: Oblique shot of paleochannel **805**, looking south, scales 1m & 1m*



*Plate 7: Northeast-facing section of paleochannel **904**, looking southwest, scales 2m*

Trench 11 (Figure 7)

- 7.10 Trench 11 was positioned in a broadly 'blank' area of the previous geophysical survey, with the southern end of the trench located in an area of ferrous/debris spread. A substantial northeast – southwest oriented linear feature, **1106**, was noted crossing the centre of the trench. A machine slot suggested the linear was a former palaeochannel, potentially the same as that noted in Trenches 4 – 6, 8 and 9 (Plate 8). A modern pit **1104** was also exposed at the southwest end of the trench (Plate 9).



*Plate 8: Oblique shot of paleochannel **1106**, looking southwest*

- 7.11 Modern pit **1104**, was rectangular shape in plan. It appeared machine cut into the topsoil 1100 and was backfilled with redeposited topsoil 1105. No finds were recovered although the cut was clearly modern.



*Plate 9: Southeast facing section of modern feature **1104**, looking northwest, scales 1m*

- 7.12 Within Trench 11 the soil profile varied from the general sequence discussed above (see 7.1) in that both the peat, 1102, and the lower roddon deposit, 1103, were exposed intermittently. The peat appeared as patches and the roddon deposit undulated as a band across northern end the trench (Plate 10). The peat deposit, 1102, was spot sampled, <1>, on advice of the geoarchaeologist.



Plate 10: Peat deposit 1102, looking northwest, scales 1m

Trench 12 (Figure 8)

- 7.13 Trench 12 was positioned within an area interpreted as a ferrous/debris spread. No archaeological features were recorded, but a linear patch of modern concrete, **1204**, was noted at the western end of the trench. Ordnance Survey mapping from 1986 suggested the former road was situated in this location with which the remains are likely associated (Tetra Tech 2025).

Trench 13 (Figure 3)

- 7.14 Trench 13 was subsequently added during the evaluation. It was positioned to further confirm the geophysical survey anomaly targeted in Trench 1 was a modern truncation.
- 7.15 A steep straight sided cut, **1304**, was exposed cutting through the upper roddon layer, 1301, at the northern end of the trench. It was infilled with two deposits, 1305, comprising a blue grit and 1306, a backfill deposit that contained modern refuse including plastic bags and modern glass. It was a pit or linear feature, possibly associated with the former railway line that crossed this part of the site (Tetra Tech 2025).



Plate 11: Modern truncation 1304, looking southwest

Trench 14 (Figure 3)

- 7.16 Trench 14 was added following the completion of the initial evaluation, on the western edge of the proposed development site in a small, relatively undisturbed field. No archaeologically significant features were identified by the excavation, with four old and broken land drains being the only features recorded.

Trench 15 and 16 (Figure 3)

- 7.17 Trenches 15 and 16 were intended to be a single 50m long trench but due to site constraints it was divided into a 30m long trench, Trench 15, and a 20m long trench, Trench 16. Trench

16 was excavated to a depth of 1m. No archaeologically significant features were identified within the trench.

- 7.18 Trench 15 was further divided in two to avoid an active electrical service identified roughly halfway along the trench. The trench was excavated to a depth of 0.95m. The L-shaped remains of timber structure 1507 were revealed during the machine excavation near the northern end of the trench (Plate 12). The remains measured 0.72m long by 0.2m wide with a 90° turn to the north, measuring 0.44m long by 0.1m wide. The construction cut, **1507**, for this structure, **1506**, was identified within the eastern trench section with a height of 0.46m. The cut was not fully excavated in order to preserve the remains in-situ but two lengths of timber were recovered. The cut truncates two alluvial layers, **1503** and **1505**, an organic/peat layer, **1504**, and a layer of staining, **1508**. There may have been some disturbance to the structural remains, related to the deposition of modern deliberate backfill, **1502**.



Plate 12: Structure 1507, looking east, scales 1m and 0.5

8.0 Discussion and Conclusions

- 8.1 The trenching did not identify any archaeological deposits of significance as part of the programme of work in advance of Phase 1 of the proposed residential development.
- 8.2 A strong geophysical anomaly noted at the northwest corner of the site (Trenches 1 and 13) was shown to be caused by modern dumping, potentially associated with a former railway line that crossed this area. Other modern intrusions were noted in Trenches 2, 3, 11 and 12.
- 8.3 A further sinuous geophysical anomaly broadly running northeast-to-southwest through Trenches 4 – 6, 8, 9 and possibly 11, was shown to be a palaeochannel. The geoarchaeological investigation indicates this is cut through an earlier roddon system that formed through draining the surrounding area in the mid-2nd millennium BC, with the initial fill of the palaeochannel identified as Nordelph Peat. The upper fills of the palaeochannel, and sealing it, are later Holocene roddon deposits.

- 8.4 Despite extensive cleaning and machine stripping, ephemeral geophysical anomalies were not identified, and it is likely that these are trace signals left in the topsoil and do not reflect activities of any archaeological interest.
- 8.5 The structure found within Trench 15 is likely part of the railway embankment that is shown to cross this area on the First Edition 1888 Ordnance Survey map. Deliberate modern backfill, 1502, appears to have disturbed the structural remains.
- 8.6 Given the lack of archaeological deposits identified within the undeveloped element of the site, it is reasonable to assume that the discovery of remains is also unlikely within the footprint of the factory (Phase 2 proposed development area), itself built over the former railway.

9.0 Effectiveness of Methodology

- 9.1 The trial trenching methodology was appropriate to the scale and extent of the project and has been successful in achieving its objectives of characterising the archaeological resource present on the site.

10.0 Acknowledgements

- 10.1 Allen Archaeology would like to thank Tetra Tech, and their client, Broadgate Homes Ltd, for commissioning this project. Thanks also go to the Historic Environment Officer, Ruben Lopez Catalan, for his advice and groundworkers for their cooperation during these works.

11.0 References

AAF, 2011, *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation*. Archaeological Archives Forum

AAL, 2025, *Specification for an archaeological evaluation by trial trenching: land off Meadow Way, Spalding, Lincolnshire*, AAL unpublished document

Cameron K., 1998, *A Dictionary of Lincolnshire Place-names*. English Place-Name Society, University of Nottingham, Nottingham

CIfA, 2023a, *Standard for archaeological field evaluation*. Chartered Institute for Archaeologists, Reading

CIfA, 2023b, *Universal guidance for archaeological field evaluation*. Chartered Institute for Archaeologists, Reading

CIfA, 2023c, *Standard for archaeological monitoring and recording*. Chartered Institute for Archaeologists, Reading

CIfA, 2023d, *Universal guidance for archaeological monitoring and recording*. Chartered Institute for Archaeologists, Reading

Coles J. and Hall D., 1998, *Changing Landscapes: The Ancient Fenland*. Cambridgeshire County Council and Wetland Archaeology Research Project

Ministry of Housing, Communities and Local Government, 2025, *National Planning Policy Framework*. London: Ministry of Housing, Communities and Local Government

Morgan P., and Thorn C., (eds.), 1986, *Domesday Book: vol.31: Lincolnshire*, Phillimore & Co. Ltd, Chichester

Historic England, 2015, *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide*. Swindon. Historic England

LCC, 2024, *Lincolnshire Archaeology Handbook*. Lincolnshire County Council

Taylor, D., 2025, *Geophysical Survey Report. Land off Meadow Way, Spalding, Lincolnshire*. Magnitude Surveys Ltd Ref: MSTF2133

Tetra Tech, 2025, *Desk Based Heritage Assessment. Land off Meadow Way, Spalding, Lincolnshire*.

Tetra Tech

Appendix 1. Context Summary

Trench	Context	Type	Fill of.	Part of.	Feature	Description	Length(m)	Width(m)	Thickness/ Depth(m)	Interpretation
1	100	Layer			100	Friable, mid greyish brown, silt			0.45	Topsoil
1	101	Layer			101	Friable, yellow, silt			0.25	Upper roddon deposit
1	102	Layer			102	Compact, very dark grey, peat			0.05	Peat
1	103	Layer			103	Friable, mid greyish blue, clayey silt			0.5	Lower roddon deposit
1	104	Fill	106		106	Compact, yellow brown, silt			0.5	Backfill of pit or linear feature
1	105	Fill	106		106	Compact, black, silt; occasional asbestos, wire, rubber and plastic rope			0.20+	Backfill of pit or linear feature
1	106	Cut			106	Steep straight sides, base unexcavated	1.8+	3.18	1.2+	Pit or linear feature
2	200	Layer			200	Friable, mid grey brown, silt			0.35	Topsoil
2	201	Layer			201	Friable, yellow, silt			0.28	Upper roddon deposit
2	202	Layer			202	Compact, very dark grey, peat			0.04	Peat
2	203	Layer			203	Friable, mid bluish grey, silt			0.2+	Lower roddon deposit
2	204	Cut			204	E-W linear, moderately steep straight sides, narrow concave base	1.8 +	1.8	0.54	Palaeochannel
2	205					VOID				VOID
2	206	Fill	204		204	Compact, light grey, silt			0.2	Natural silting
2	207	Layer			207	Compact, mid grey brown, silt			0.22	Subsoil
2	208	Cut			208	NE-SW linear, unexcavated	3+	1.94	.	Modern linear feature
2	209	Fill	208		208	Compact, mid brown silt; occasional modern refuse Incl. concrete and wooden fencepost			.	Backfill of linear feature
3	300	Layer			300	Friable, mid brownish grey, silt			0.3	Topsoil
3	301	Layer			301	Compact, mid brownish grey, silt; occasional broken drain and concrete			0.3	Made ground
3	302	Layer			302	Compact, yellow, silt			0.07-0.4	Upper roddon deposit
3	303	Layer			303	Compact, very dark brown, silt			0.03	Peat
3	304	Layer			304	Friable, mid greyish blue, clayey silt			0.46	Lower roddon deposit
3	305	Layer			305	Compact, mid grey brown, silt; occasional angular flint and concrete			0.65	Made ground
3	306	Layer			306	Compact, black, silty sand; modern wood			0.20+	Made ground
3	307	Cut			307	N-S linear, unexcavated	3.3	0.8	.	Modern linear feature
3	308	Fill	307		307	Compact, black, silt; modern refuse including concrete			.	Backfill of linear feature
4	400	Layer			400	Friable, mid grey brown, silt			0.3	Topsoil
4	401	Layer			401	Friable, mid yellow, silt			0.2	Upper roddon deposit
4	402	Layer			402	Compact, mid grey brown, peat			0.03	Peat

Trench	Context	Type	Fill of.	Part of.	Feature	Description	Length(m)	Width(m)	Thickness/ Depth(m)	Interpretation
4	403	Layer			403	Compact, mid bluish grey, silty clay			0.4+	Lower roddon deposit
4	404	Cut			404	NE-SW linear, gradual concave side, gentle break of slope, concave base	1.8+	2.9	1.2	Palaeochannel
4	405	Fill	404		404	Light grey brown, silty sand			0.3	Natural accumulation
4	406	Fill	404		404	Mid grey, clayey sand			0.1	Natural accumulation
5	500	Layer			500	Friable, mid grey brown, silt			0.3	Topsoil
5	501	Layer			501	Friable, mid yellow, silt			0.3	Upper roddon deposit
5	502	Layer			502	Compact, dark brownish grey, peat			0.04	Peat layer
5	503	Layer			503	Compact, mid bluish grey, silty clay			0.4	Lower roddon deposit
5	504	Cut			504	NE-SW linear, moderately steep concave side, concave base	1.8+	1.84	1	Palaeochannel
5	505	Fill	504		505	Mid greyish brown, silty clay			0.4	Natural accumulation
5	506	Fill	504		506	Mid greyish brown, silt			0.2	Natural accumulation
6	600	Layer			600	Friable, mid brownish grey, silt			0.32	Topsoil
6	601	Layer			601	Friable, mid yellow, silt			0.35	Upper roddon deposit
6	602	Layer			602	Friable, dark brownish grey, peat			0.04	Peat
6	603	Layer			603	Compact, mid grey, silty clay			0.3	Lower roddon deposit
6	604	Cut			604	NW-SE linear, gradual concave side, gentle break of slope, concave base	1.8	4.2	.	Palaeochannel
6	605	Fill	604		605	Mid greyish brown, silty clay			.	Natural accumulation
7	700	Layer			700	Friable, mid grey brown, silt			0.3	Topsoil
7	701	Layer			701	Friable, mid yellow, silt			0.3	Upper roddon deposit
7	702	Layer			702	Compact, dark brownish grey, peat			0.04	Peat
7	703	Layer			703	Compact, mid bluish grey, silty clay			0.10+	Lower roddon deposit
8	800	Layer			800	Friable, mid brown, silt			0.3	Topsoil
8	801	Layer			801	Friable, mid yellow, silt			0.38	Upper roddon deposit
8	802	Layer			802	Friable, dark brown grey, silt			0.02	Peat
8	803	Layer			803	Compact, mid greyish blue, silty clay			0.08	Lower roddon deposit
8	804	Layer			804	Loose, flint gravel.			.	Gravel dump
8	805	Cut			805	N-S linear, moderately steep concave sides, base unexcavated	1.7	4.7	1+	Palaeochannel
9	900	Layer			900	Friable, mid brown, sandy silt			0.3	Topsoil
9	901	Layer			901	Friable, mid yellow, silt			0.35	Upper roddon deposit
9	902	Layer			902	Friable, dark brown grey, peat			0.1	Peat
9	903	Layer			903	Compact, mid grey brownish, clay			1.00+	Lower roddon deposit
9	904	Cut			904	NE-SW linear, moderately steep concave sides, concave base	1.8+	3.2	0.90+	Palaeochannel
9	905	Fill	904		905	Mid brown yellow, sandy silt			0.2	Natural accumulation
10	1000	Layer			1000	Friable, mid brown, silt			0.35	Topsoil

Trench	Context	Type	Fill of.	Part of.	Feature	Description	Length(m)	Width(m)	Thickness/ Depth(m)	Interpretation
10	1001	Layer			1001	Loose, pea gravel			.	Dump of pea gravel
10	1002	Layer			1002	Friable, mid yellow, silt			0.5	Upper roddon deposit
10	1003	Layer			1003	Friable, dark brownish grey, peat			0.04	Peat
10	1004	Layer			1004	Compact, mid grey, clayey silt			1.00+	Lower roddon deposit
11	1100	Layer			1100	Friable, mid brownish grey, silt			0.25	Topsoil
11	1101	Layer			1101	Friable, mid orange brown, silt			0.45+	Upper roddon deposit
11	1102	Layer			1102	Compact, black, peat			.	Peat
11	1103	Layer			1103	Compact, mid bluish grey, silty clay			.	Lower roddon deposit
11	1104	Cut			1104	Rectangular shape in plan, moderately steep straight west side , vertical east side, flat base	1.95	2.65	0.98	Machine cut pit
11	1105	Fill	1104		1104	Loose, mid greyish brown, sandy silt			0.98	Backfill of machine cut pit
11	1106	Cut			1106	WSW-ENE linear, unexcavated	12+	2.5+	.	Palaeochannel
11	1107	Fill	1106		1106	Mid brown, silt			.	Natural accumulation
12	1200	Layer			1200	Friable, mid brown, silt; occasional construction refuse and gravel			0.25	Topsoil
12	1201	Layer			1201	Friable, mid yellow, silt			0.12	Upper roddon deposit
12	1202	Layer			1202	Compact, very dark grey, peat			0.04	Peat
12	1203	Layer			1203	compact, grey brown, silt			0.70+	Lower roddon deposit
12	1204	Layer			1204	NW-SE linear, concrete wall	2	0.69	.	Modern concrete wall
13	1300	VOID				VOID			.	VOID
13	1301	Layer			1301	Friable, mid greyish brown, silt			0.45	Topsoil
13	1302	Layer			1302	Friable, yellow, silt			0.3	Lower roddon deposit
13	1303	Layer			1303	Friable, mid greyish blue, clayey silt			0.9	Upper roddon deposit
13	1304	Cut			1304	E-W linear, steep straight side southern side, unknown base, not fully excavated.	1.8+	1.2+	1.2	Modern linear feature
13	1305	Fill	1304		1304	Loose, light grey blue, grit			0.05	Grit within linear feature
13	1306	Fill	1304		1304	Firm, mottled light yellow brown silty sand and dark brown silty clay; occasional modern refuse including plastic bag, modern glass			1.2	Backfill of linear feature
13	1307	Layer			1307	Compact, very dark grey, peat			0.04	Peat

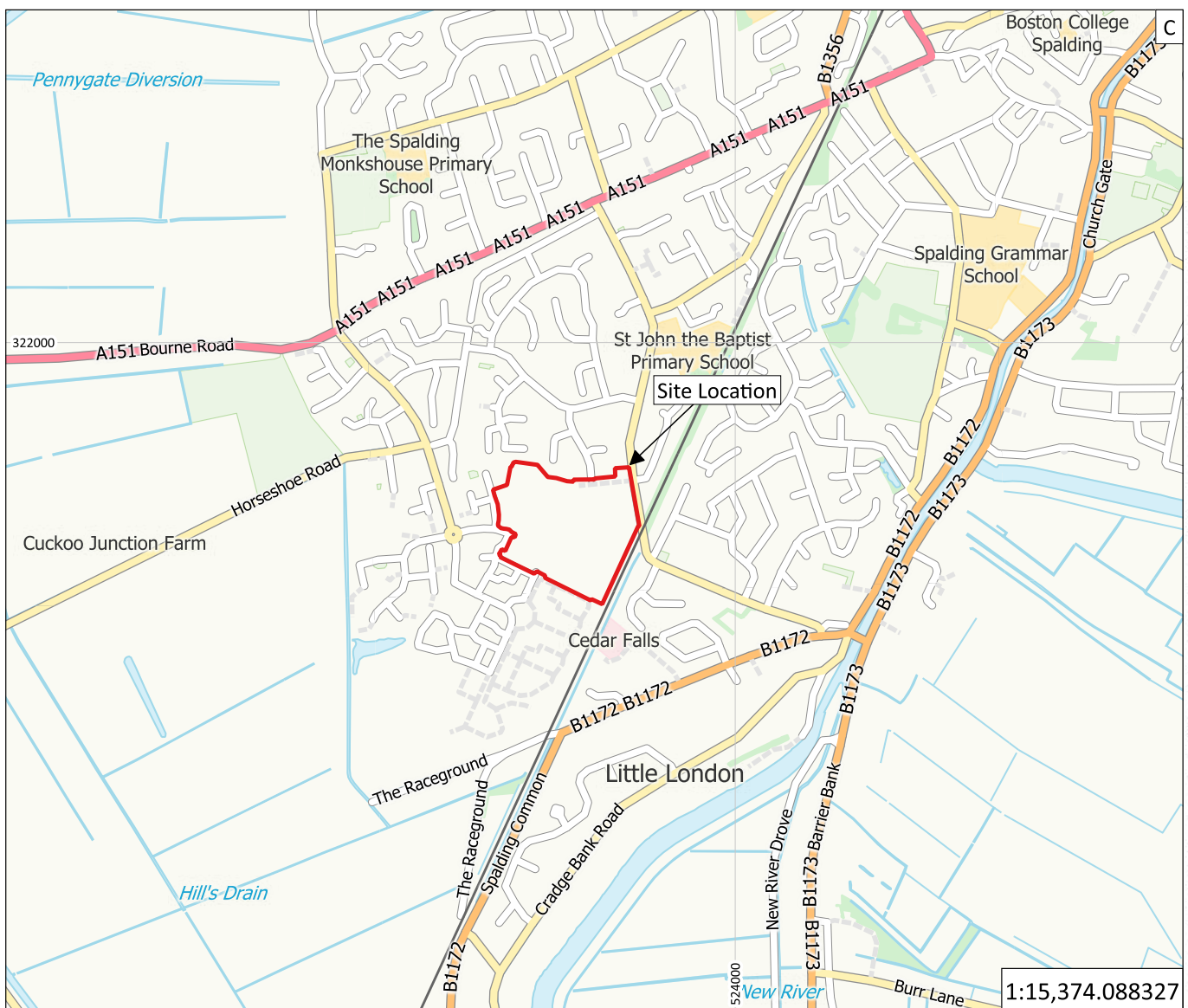
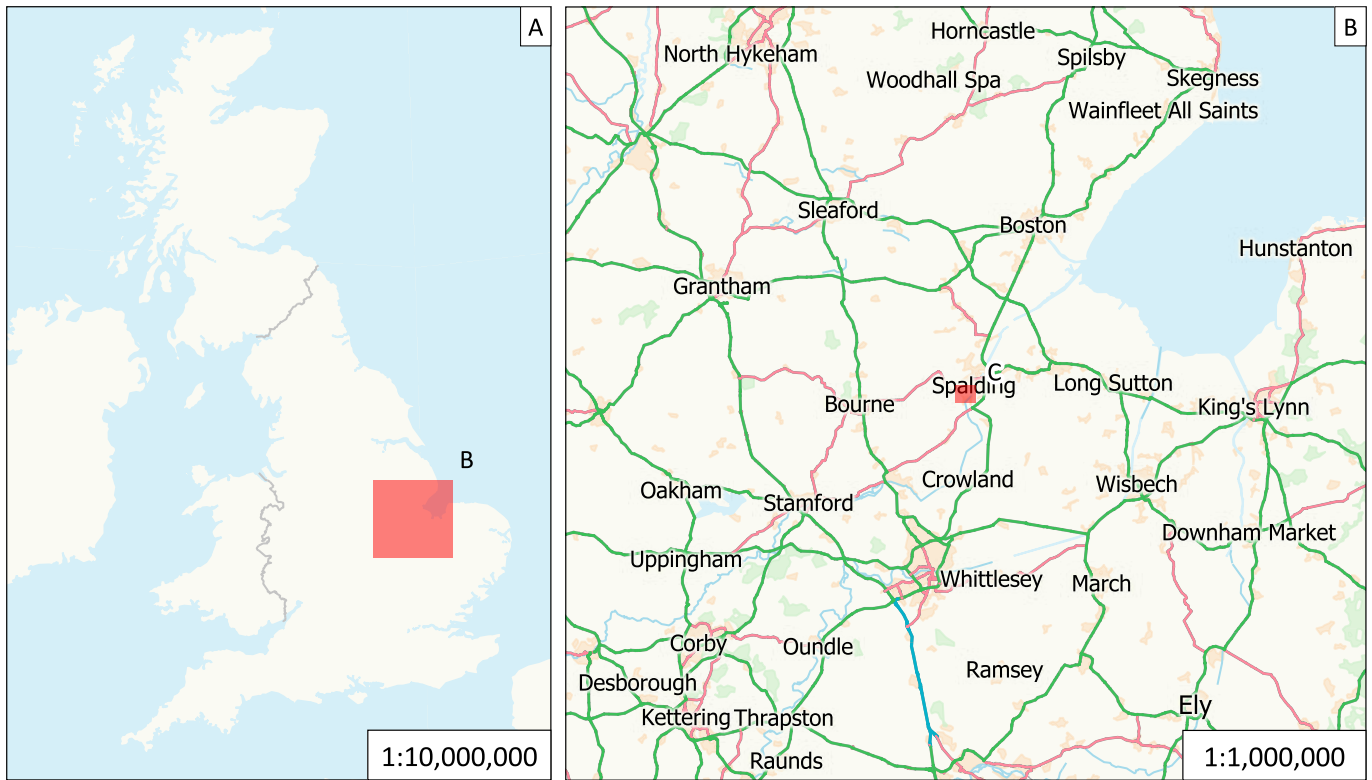


Figure 1: Site location outlined in red



MEADOW WAY, SPALDING,
LINCOLNSHIRE
Site Code: SPCM25

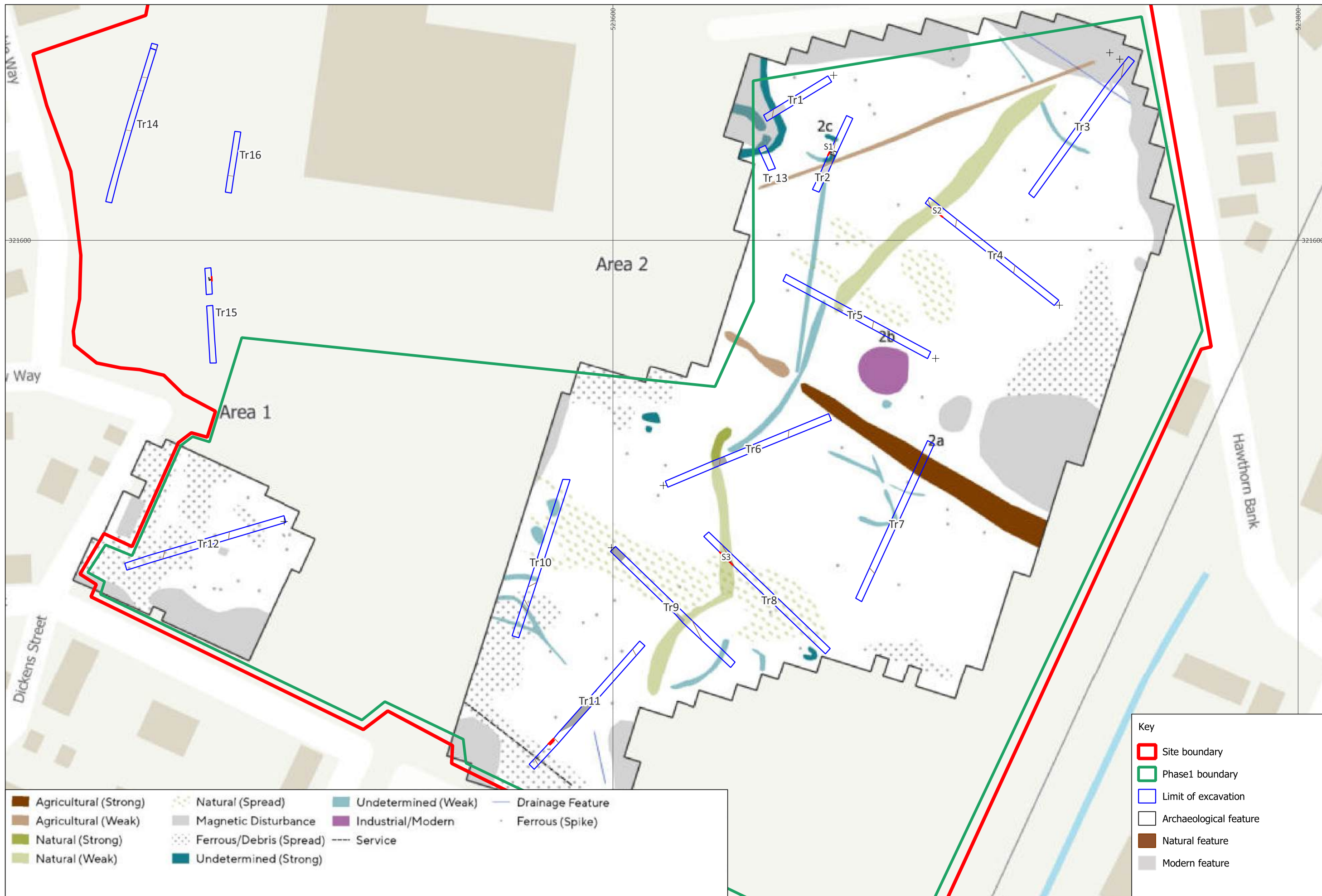


Figure 2: Trench location plan superimposed over geophysical interpretation (Magnitude Surveys 2025)

MEADOW WAY, SPALDING,
LINCOLNSHIRE
Site Code: SPCM25

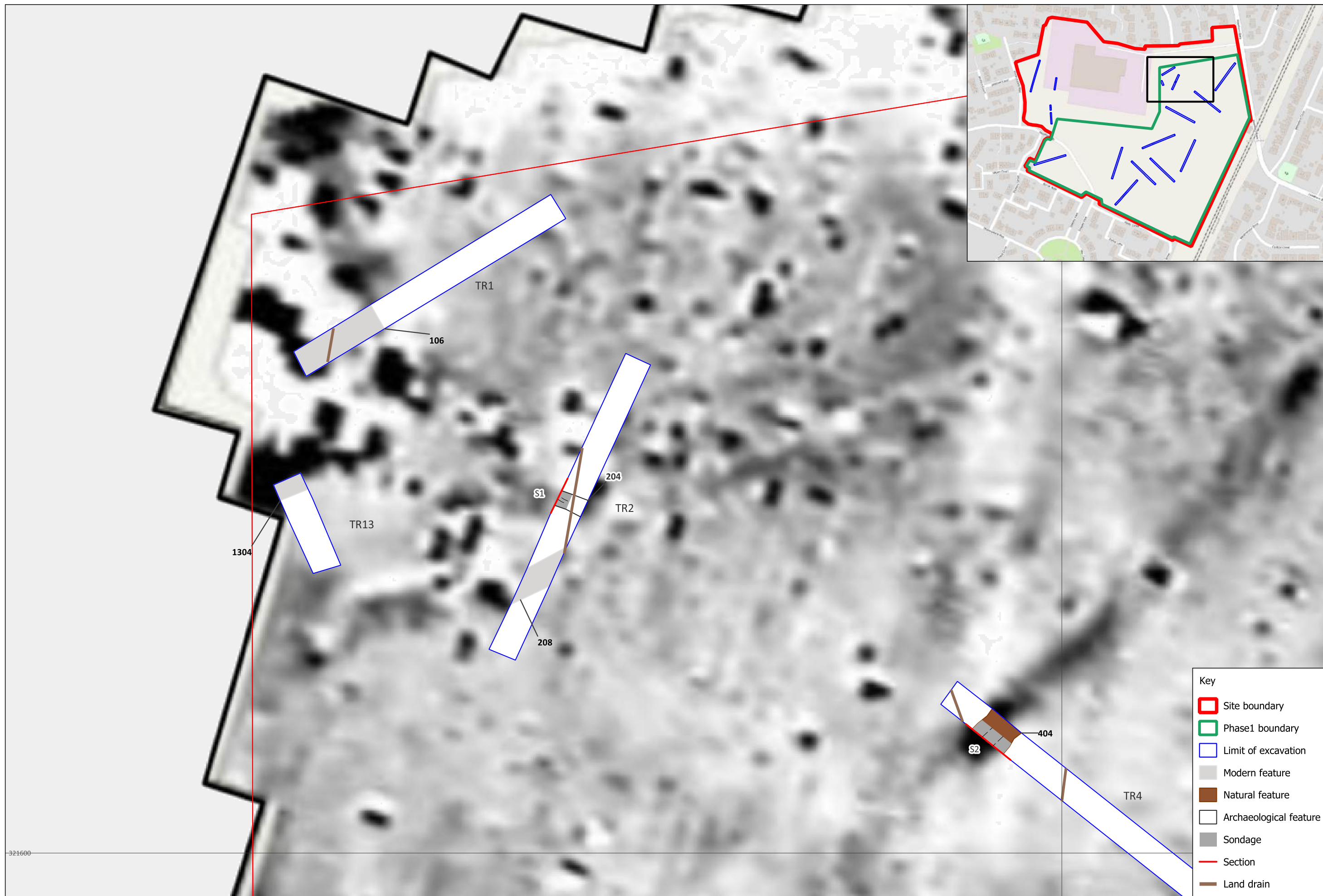


Figure 3: Plan of Trenches 1, 2, 4 and 13

0 5 10 15 20 m
1:250



MEADOW WAY, SPALDING,
LINCOLNSHIRE
Site Code: SPCM25

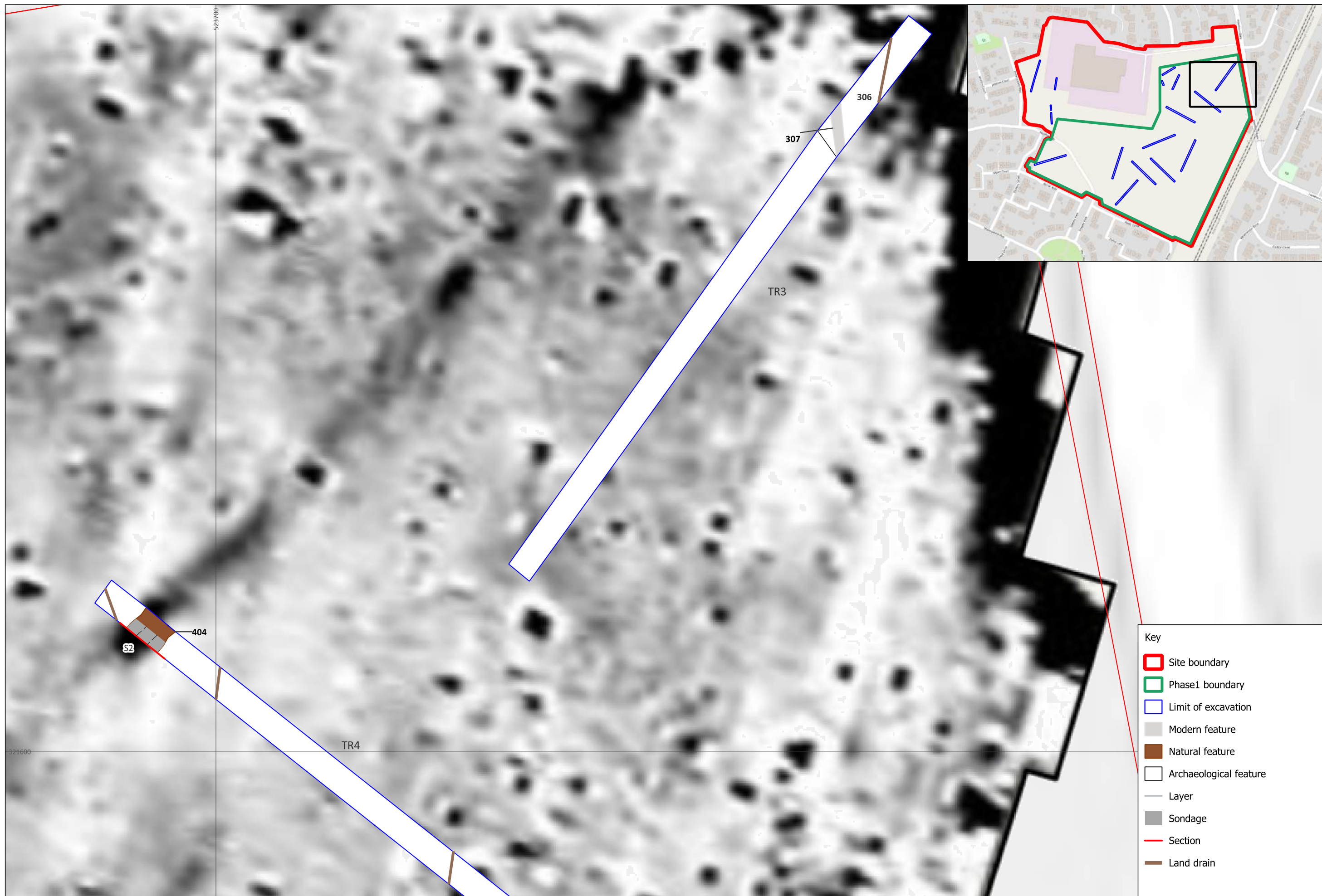
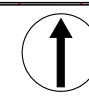



 Figure 4: Plan of Trenches 3 and 4

0 5 10 15 20 m
 1:250


 MEADOW WAY, SPALDING,
 LINCOLNSHIRE
 Site Code: SPCM25

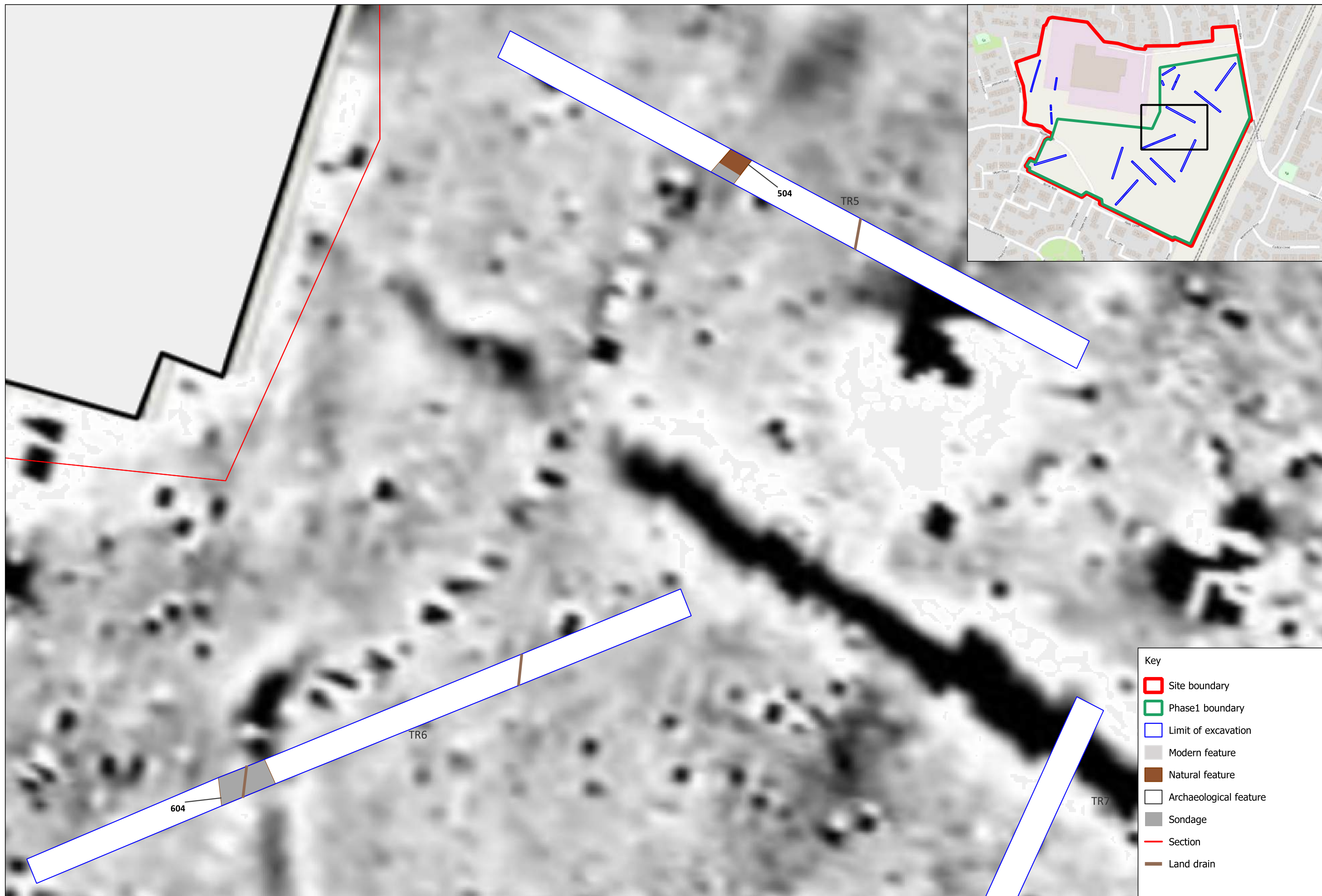


Figure 5: Plan of Trenches 5, 6 and 7

0 5 10 15 20 m
1:250

MEADOW WAY, SPALDING,
LINCOLNSHIRE
Site Code: SPCM25

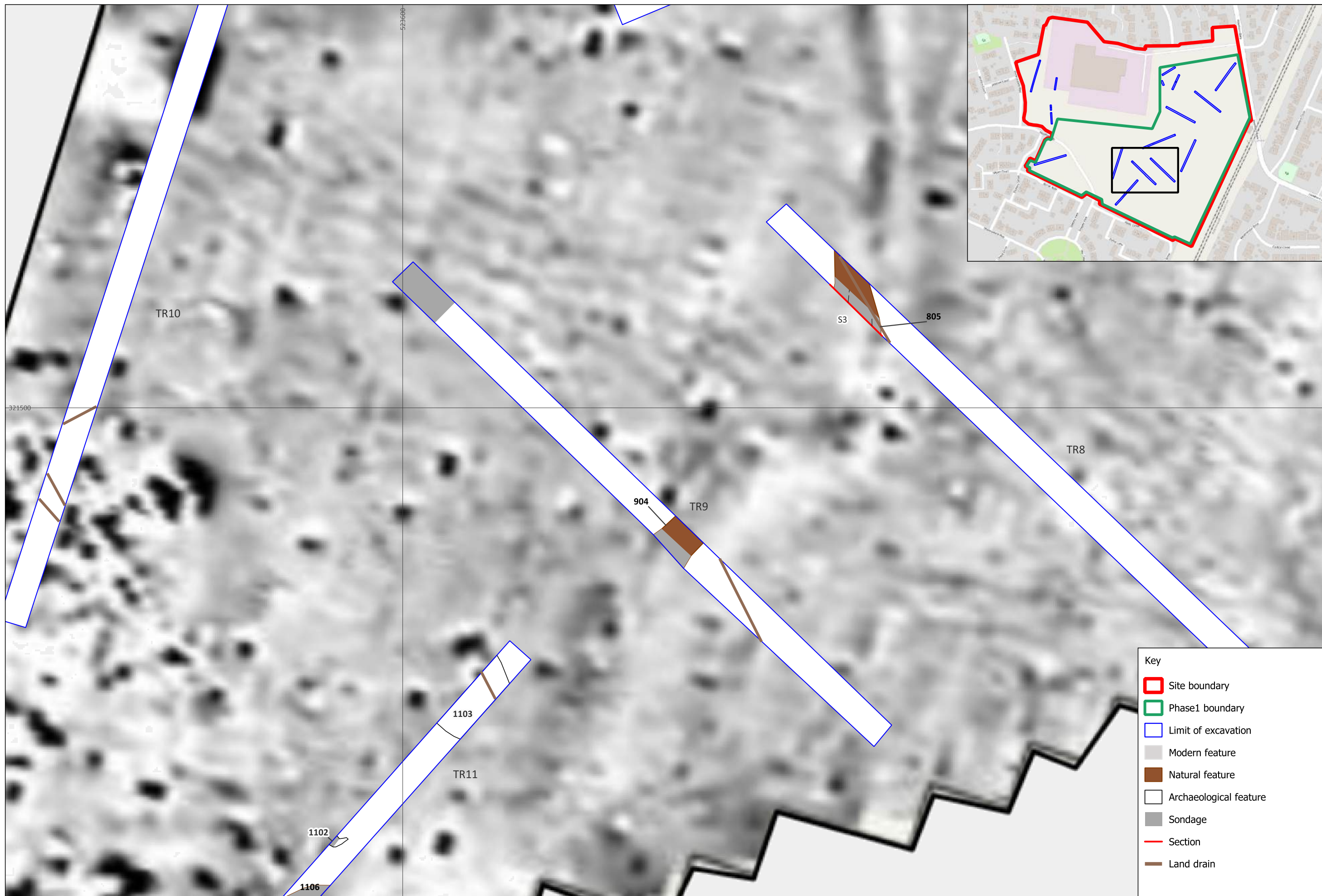
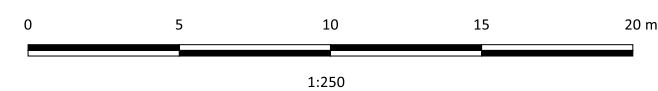


Figure 6: Plan of Trenches 8, 9, 10 and 11



MEADOW WAY, SPALDING,
LINCOLNSHIRE
Site Code: SPCM25

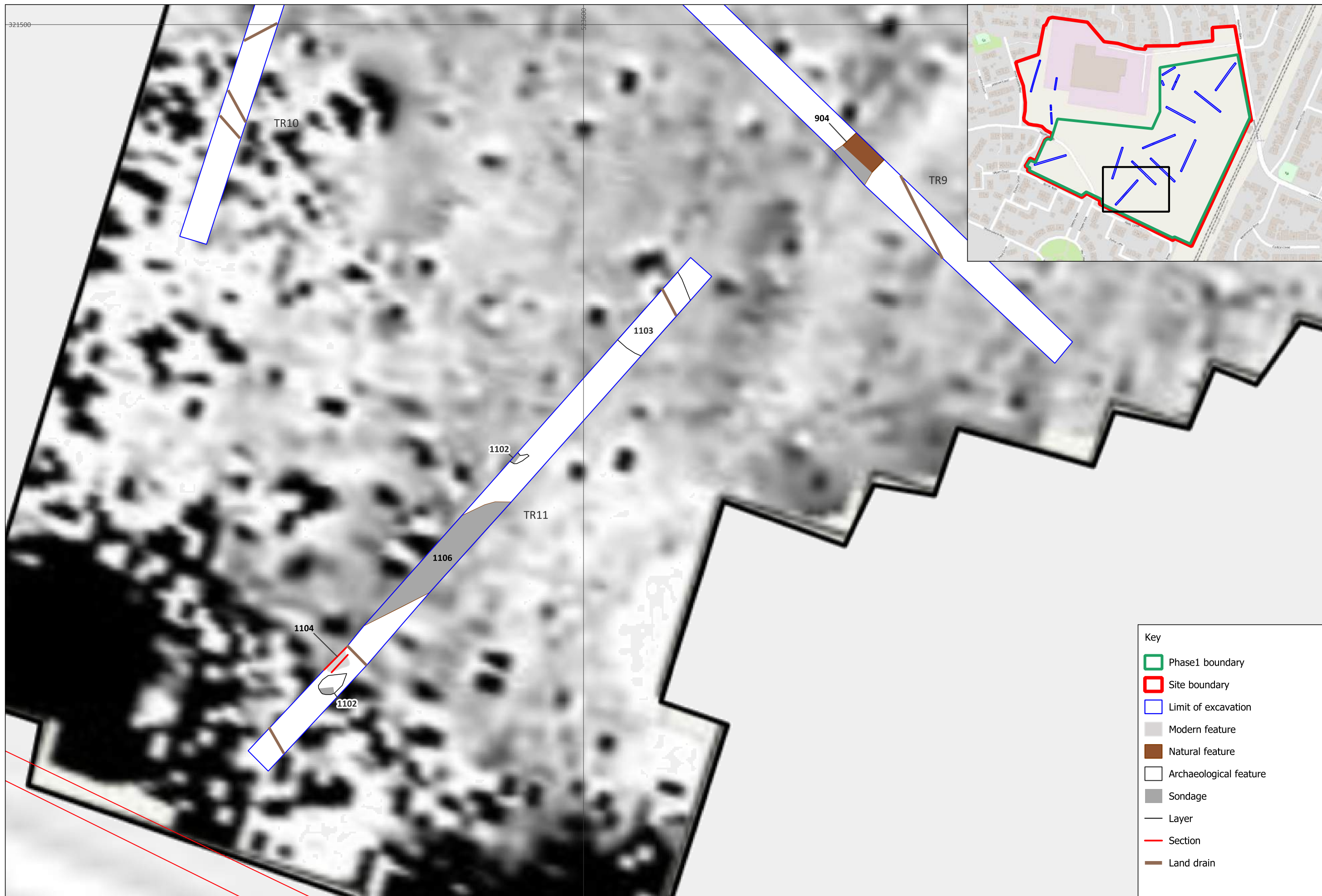
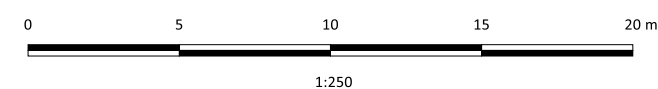


Figure 7: Plan of Trenches 9, 10, and 11



MEADOW WAY, SPALDING,
LINCOLNSHIRE
Site Code: SPCM25

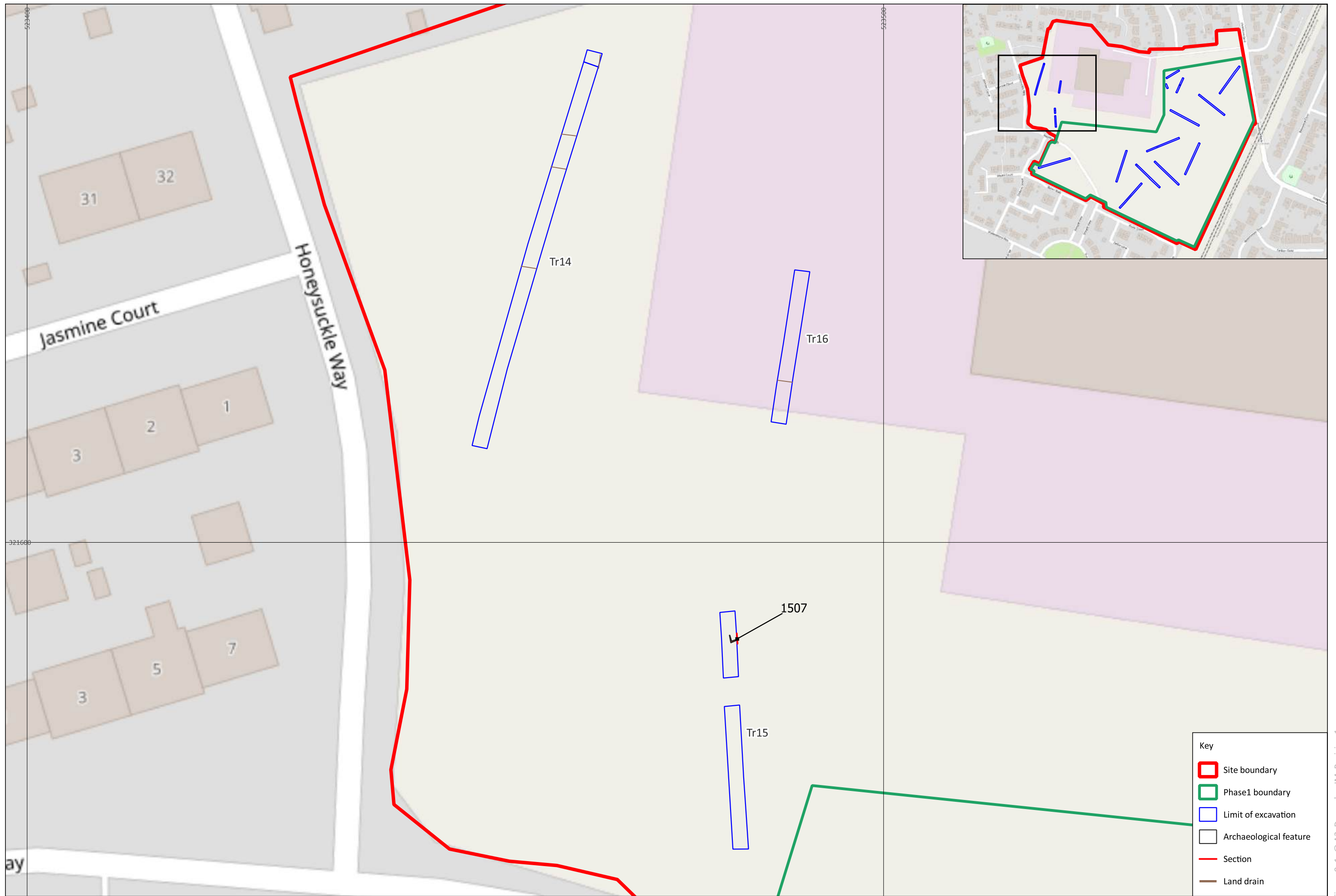
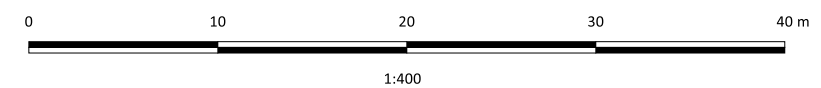


Figure 9: Plan of Trenches 14, 15 and 16



Key

- Site boundary
- Phase1 boundary
- Limit of excavation
- Archaeological feature
- Section
- Land drain

MEADOW WAY, SPALDING,
LINCOLNSHIRE
Site Code: SPCM25

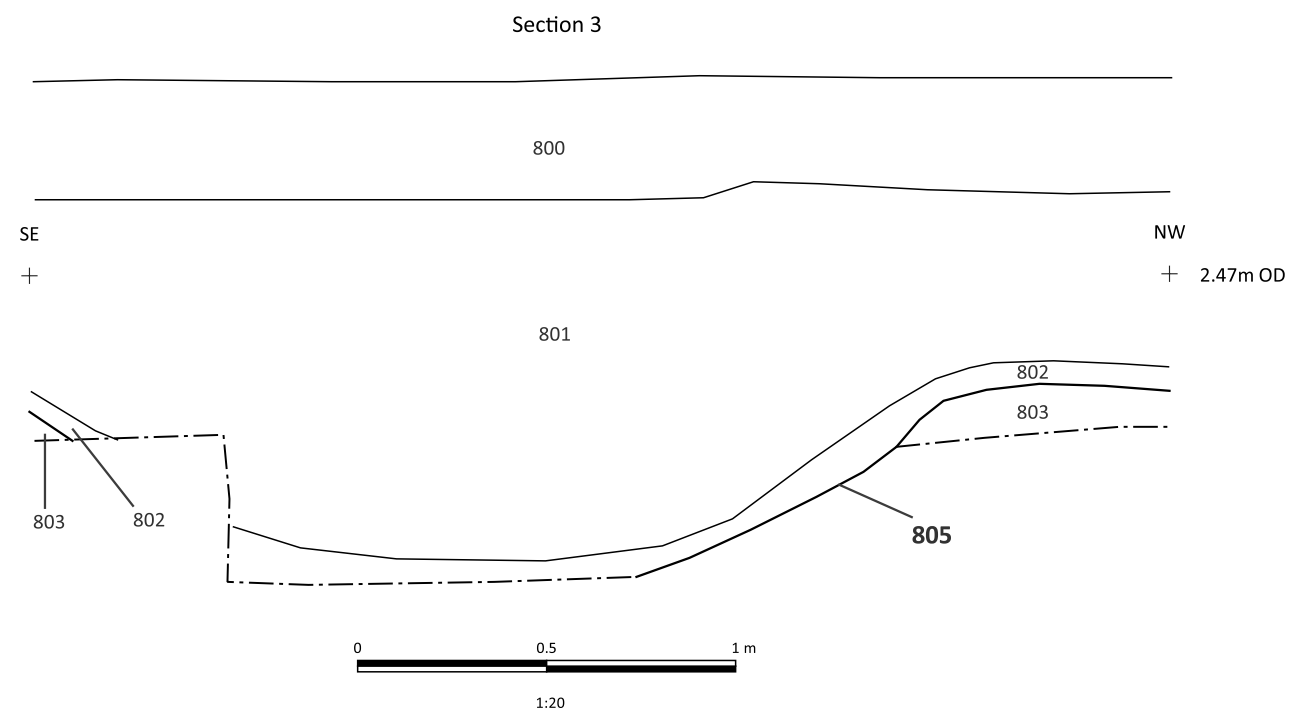
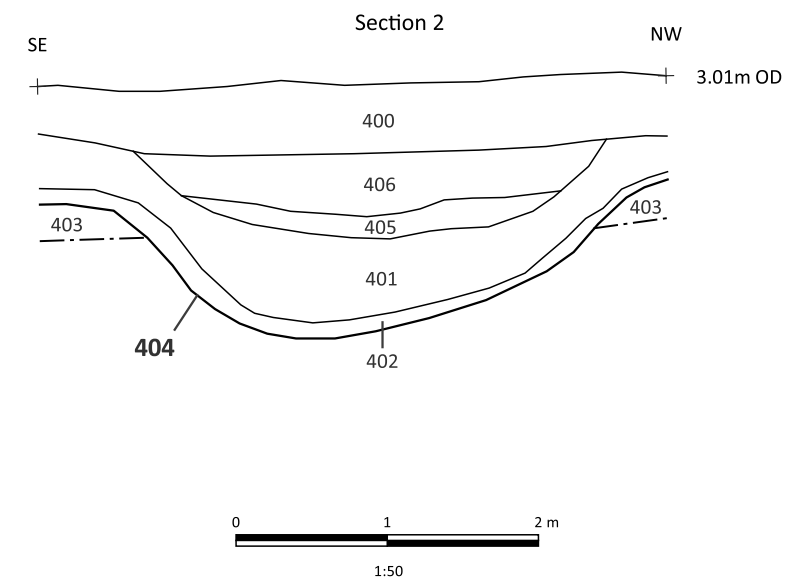
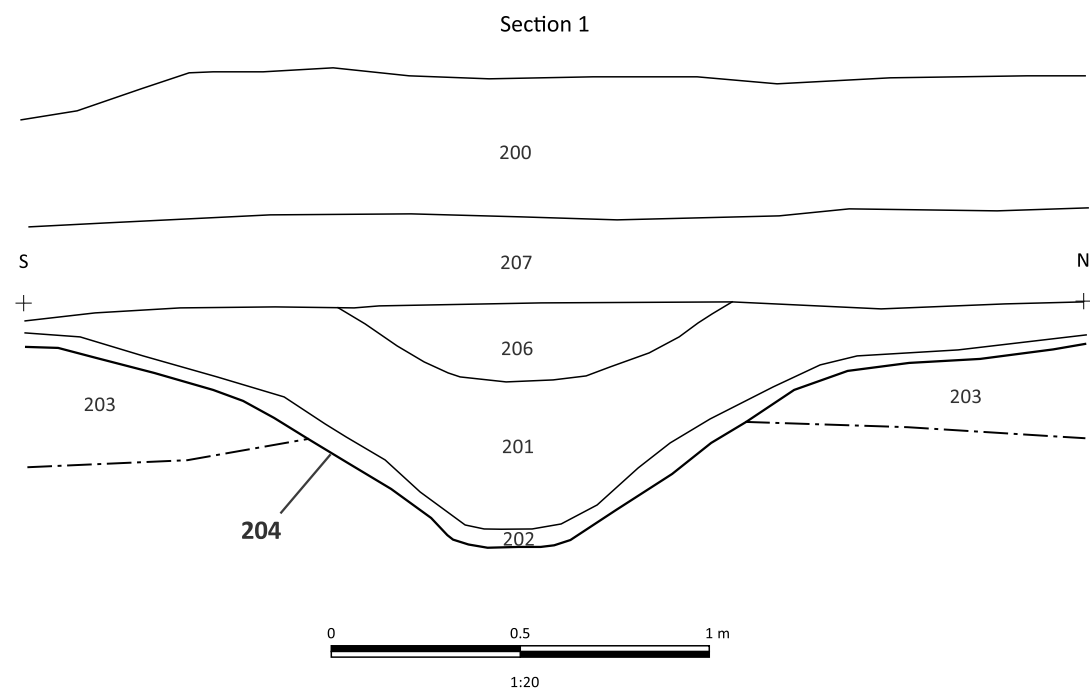


Figure 10: Section 1-3

OASIS Summary for allenarc1-539522

OASIS ID (UID)	allenarc1-539522
Project Name	Trial Trench at LAND OFF MEADOW WAY, SPALDING, LINCOLNSHIRE
Sitename	LAND OFF MEADOW WAY, SPALDING, LINCOLNSHIRE
Sitecode	SPCM 25
Project Identifier(s)	TRIAL TRENCHING ON LAND OFF MEADOW WAY, SPALDING, LINCOLNSHIRE
Activity type	Trial Trench
Planning Id	
Reason For Investigation	Planning: Pre application
Organisation Responsible for work	Allen Archaeology Limited
Project Dates	24-Nov-2025 - 28-Nov-2025
Location	LAND OFF MEADOW WAY, SPALDING, LINCOLNSHIRE NGR : TF 23679 21542 LL : 52.77730565769932, -0.167911450673426 12 Fig : 523679,321542
Administrative Areas	Country : England County/Local Authority : Lincolnshire Local Authority District : South Holland Parish : South Holland, unparished area
Project Methodology	The trial trenching methodology initially entailed the excavation of 12 trenches comprising 10no 50m x 1.8m trenches and 2no 25m x 1.8m trenches, with an additional trench included following on site discussions with the advising Historic Environment Officer. A programme of geoarchaeological investigation was also undertaken, comprising nine geoarchaeological test pits.
Project Results	The trenching did not identify any archaeological deposits of significance. A palaeochannel was noted running northeast to southwest through the site and was found to cut a lower sequence of roddon deposits that were laid down in the mid-2nd millennium BC. The lowermost fill of the former channel contained Nordelph peat and was filled and sealed by later Holocene roddon deposits. Modern made ground and cut features were noted at the north and southern ends of the site. In summary, the evaluation indicates that the potential for significant archaeological remains within the site is negligible.
Keywords	Ditch - UNCERTAIN - FISH Thesaurus of Monument Types Boundary Ditch - POST MEDIEVAL - FISH Thesaurus of Monument Types
Funder	Other utilities or infrastructure company RPS/TetraTech
HER	Lincolnshire HER - unRev - STANDARD
Person Responsible for work	Mark Allen
HER Identifiers	

Archives	Documentary Archive - to be deposited with The Collection: Art and Archaeology in Lincolnshire;
----------	---

Report generated on: 26 Jan 2026, 15:07



Spalding Common, Lincolnshire: Geoarchaeological Assessment

By Luke Parker

YA Assessment Report 2025/288 January 2026



York Archaeological Trust undertakes a wide range of urban and rural archaeological consultancies, surveys, evaluations, assessments and excavations for commercial, academic and charitable clients. We manage projects, provide professional advice and fieldwork to ensure a high quality, cost effective archaeological and heritage service. Our staff have a considerable depth and variety of professional experience and an international reputation for research, development and maximising the public, educational and commercial benefits of archaeology. Based in York, Sheffield, Nottingham and Glasgow the Trust's services are available throughout Britain and beyond.

York Archaeological Trust, Cuthbert Morrell House, 47 Aldwark, York YO1 7BX

Phone: +44 (0)1904 663000 Fax: +44 (0)1904 663024

Email: archaeology@yorkat.co.uk

Website: <http://www.yorkarchaeology.co.uk>

© 2021 York Archaeological Trust for Excavation and Research Limited

Registered Office: 47 Aldwark, York YO1 7BX

A Company Limited by Guarantee. Registered in England No. 1430801

A registered Charity in England & Wales (No. 509060) and Scotland (No. SC042846)

CONTENTS

1. INTRODUCTION.....	7
1.1 Site background	7
1.2 Geology and Topography	7
1.3 Planning Background.....	7
2. GEOARCHAEOLOGICAL BACKGROUND.....	8
2.2 Archaeological context.....	9
4. GEOARCHAEOLOGICAL METHODOLOGY	11
4.1 Fieldwork Methodology	11
5. RESULTS	12
5.1 Lithology and deposit modelling.....	12
6. DISCUSSION AND CONCLUSIONS.....	12
6.1 Overview of lithological sequence	12
6.2 Deposit survival and existing impacts.....	12
6.3 Discussion of deposits	13
6.4 Consideration of research aims	14
6.5 Potential impacts	14
6.6 Conclusions.....	14
REFERENCES	15
APPENDIX 1. TROELS-SMITH	17
APPENDIX 2 – TEST PIT LOGS.....	18

FIGURES

Figure 01: Site location.

Figure 02: Intervention locations.

Figure 03: Regional Lidar Elevation

Figure 04: Regional Lidar with *Hayes and Lane, 1992*

Figure 05: Modelled lower roddon surface

PLATES

Plate 01. Shot of TP01

Plate 02. Shot of TP02

Plate 03. Shot of TP03

Plate 04. Shot of TP04

Plate 05. Shot of TP05

Plate 06. Shot of TP06

Plate 07. Shot of TP07

Plate 08. Shot of TP10

Plate 09. Shot of TP12

Plate 10. Shot of evaluation trench section showing second, upper, phase of roddon deposition

KEY PROJECT INFORMATION

Project Name	Spalding Common, Lincolnshire: Geoarchaeological Assessment
YA Project Code	10702
Report status	For submission
Type of Project	Geoarchaeological Assessment
Client	Allen Archaeology
Planning Reference	Pre-planning
OASIS ID	N/A
NGR	TF 523679 321542
Authors	Luke Parker
Illustrations	Luke Parker
Editor	K Krawiec
Report Number	YA/2025/288
Version and Filename	10702_Spalding_Common_V1

Copyright Declaration:

York Archaeology give permission for the material presented within this report to be used by the archives/repository with which it is deposited, in perpetuity, although York Archaeological Trust retains the right to be identified as the author of all project documentation and reports, as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79). The permission will allow the repository to reproduce material, including for use by third parties, with the copyright owner suitably acknowledged.

Disclaimer:

This document has been prepared for the commissioning body and titled project (or named part thereof) and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of the author being obtained. York Archaeological Trust accepts no responsibility or liability for the consequences of this document being used for a purpose other than that for which it was commissioned.

Abstract

York Archaeology (YA) were commissioned by Allen Archaeology to undertake geoarchaeological test pitting at Spalding Common (TF 37930 17690, Figure 01) on the 26th November 2025 as part of pre-planning for a prospective residential development. A total of nine test pits were excavated at the ends of the same number of archaeological evaluation trenches.

The test pits demonstrated a sequence characterised as two broad phases of roddon deposition. The first, lowermost, phase was a silty fine sand which extended beyond the maximum excavated depth and was recorded up to around 1.00-0.50m BGL (2.60-1.40m OD); transitioning from an unoxidised blue colour to an oxidised brownish yellow towards the top.

The second phase was reflected in a transition to around 0.16m of firm clay, overlain by a thin very silty and sandy, very well humified and desiccated peat which had a thickness of around 0.02m. This peat was overlain by around 0.40-0.50m of silty sand up to the modern topsoil. The peat is viewed as being a part of the second phase of roddon activity as within sections in the evaluation trenches the peat was recorded as being within discrete channel features

The area around the site is located at the confluence of multiple, large, roddon channel systems which extend throughout the wider landscape. Regional Lidar mapping illustrates the surface expression of what was once this system, including the large estuarine trunk which extends north east into Spalding. The site is located within the boundaries of this ancient estuary, which deposited over 15m of fine silty sand that extends beyond any local BGS borehole within the vicinity of the site. The Fenland Project (Hayes and Lane, 1992) demonstrate how the creek systems, as well as the large estuary at Spalding, are the product of drainage during the mid-2nd millennium BC.

The desiccated sandy peat overlying the lower roddon deposits is viewed as pertaining to the Nordelph peat due to it post-dating the deposition of mid-2nd millennium BC roddon deposits. Overlying this are further inorganic roddon deposits relating to later Holocene deposition within small channels.

The roddon sediments have limited intrinsic archaeological and palaeoenvironmental potential due to the highly oxidised and minerogenic nature of the deposits. Likewise, the thin (Nordelph) peat horizon recorded within the upper roddon sequence is of limited archaeological and palaeoenvironmental potential due to the poor state of preservation. Although the impacts from this development may be considerable, they are unlikely to impact deposits of archaeological or palaeoenvironmental significance.

1. INTRODUCTION

1.1 Site background

- 1.1.1 York Archaeology were commissioned by Allen Archaeology to undertake geoarchaeological test pitting at Spalding Common (TF 37930 17690, Figure 01) on the 26th November 2025 as part of pre-planning for a prospective residential development. A total of nine test pits were excavated at the ends of the same number of archaeological evaluation trenches.
- 1.1.2 This geoarchaeological assessment follows the archaeological specification (Allen Archaeology, 2025) written for both the archaeological trenching and geoarchaeological test pits and follows an earlier desk-based assessment (DBA; RPS/TetraTech 2024).

1.2 Geology and Topography

- 1.2.1 The area of the geoarchaeological survey was centred on NGR TF 37930 17690 (Figure 01) within open grass fields located to the immediate north east and south west of Meadow Way, Spalding. The survey area was bordered a railway track to the east, Hawthorn Bank and Ambleside Drive to the north, recent housing development associated with Keats Grove and Byron walk to the south, and further recent housing developments and the FK Sports warehouse to the west.
- 1.2.2 The underlying bedrock geology of the site as mapped by the British Geological Survey (BGS) is that of Oxford Clay Formation-Mudstone. These sedimentary rocks are shallow-marine in origin. They are detrital, ranging from coarse- to fine-grained (locally with some carbonate content) forming interbedded sequences.
- 1.2.3 This is overlain by Holocene Tidal Flat Deposits- clay and silt. These sedimentary deposits are shallow-marine in origin. They are detrital, generally coarse-grained forming beaches and bars in a coastal setting.
- 1.2.4 BGS intervention data within the vicinity is primarily limited to shallow 1.50m test pits which record dense orange brown fine sand overlain by the modern topsoil.
- 1.2.5 A more extensive borehole is recorded as being present within the site boundary (TF22SW159). This borehole recorded a medium-dense grey brown sand with traces of silt which extended beyond the 10m boreholed limit, was present up to 2.50m BGL. This was then overlain by a loose brown and orange fine sandy silt up to 0.40m BGL where the modern topsoil was recorded.
- 1.2.6 A further BGS borehole was located around 100m to the south east of the site (TF22SW158) where a similar stratigraphy to the above borehole was recorded (Section 1.2.5). This borehole recorded a medium-dense brown sand which extended beyond the 15m boreholed limit and composed the entirety of the sequence up to the modern topsoil at 0.15m BGL.

1.3 Planning Background

- 1.3.1 This investigation is part of works undertaken prior to the submission of a planning application for a residential housing development. The Historic Environment Officer at Lincolnshire County Council requested a programme of archaeological evaluation by trial trenching and geoarchaeological investigation to provide information to allow the planning authority to make a reasoned decision as to whether any further intrusive investigations will be required to mitigate the effects of the proposed development upon the archaeological resource, either prior to or following determination of the proposed application.

1.3.2 Developments of this nature and their impact on the historic environment are addressed by the revised 2024 National Planning Policy Framework (NPPF) published by the Ministry of Housing, Communities and Local Government (MHCLG) and the NPPF Planning Practice Guide Conserving and Enhancing the Historic Environment (DCLG 2014, Updated 2024, amended 2025). This now supersedes the 2012 National Planning Policy Framework (NPPF).

1.3.3 Section 16 of NPPF, paragraph 205 states:

Local planning authorities should maintain or have access to a historic environment record. This should contain up-to-date evidence about the historic environment in their area and be used to:

a) assess the significance of heritage assets and the contribution they make to their environment; and

b) predict the likelihood that currently unidentified heritage assets, particularly Sites of historic and archaeological interest, will be discovered in the future.

1.3.4 In addition, paragraph 207, states that:

In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a Site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

1.3.5 Furthermore, paragraphs 212 and 208 of the NPPF state:

When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.

Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.

2. GEOARCHAEOLOGICAL BACKGROUND

2.1.1 The oldest superficial deposits within the region consist of river terrace deposits (March Gravels) formed by networks of high energy rivers which characterised the wider area during ice-free periods of the Pleistocene (2.58 million BP to 11,700 BP). Subsequent late Pleistocene/early Holocene (11,700 BP to the present day) sea level rise, glacioisostatic rebound and river action led to incision through and downcutting of these terraces, forming drier gravel islands within a wetland landscape which have been a major focus for settlement during the Holocene.

2.1.2 The site lies within the geological setting of the Fenland; a complex sedimentary depositional system which developed following the last glacial maximum as sea levels

rose in response to the decay of the British and Irish Ice sheet (Hughes et al., 2016).

- 2.1.3 Sea level rise during the early Mesolithic resulted in seasonal flooding and peat growth in the deepest parts of the Fenland basin (Godwin, 1974). Continued sea level rise during the early Neolithic led to the inundation of former river systems and widespread deposition of silts and clays, mapped as Tidal Flat Deposits by the British Geological Survey (BGS) (Wheeler and Waller, 1995). Flooding beyond tidal flat areas induced waterlogging and vegetation growth, which formed thick peat deposits as water levels lowered (Godwin, 1974).
- 2.1.4 In the late Bronze Age to early Iron Age periods, sea levels rose once again sealing the peat deposits with silts and clays. From the late Bronze Age through to the Roman period (which is characterised by significant flooding), many river channels silted up and became inactive (Smith et al., 2012).
- 2.1.5 Reclamation of the land in the post-medieval period led to the erosion and wastage of fenland peat, causing a reduction in topography. As a result, silt roddons (sand and silt mounds created when former river channels silted up) began to protrude from the lower lying peatlands and become more prominent in the landscape.

2.2 Archaeological context

- 2.2.1 The following historic background for the site is taken and summarised from the WSI (Allen Archaeology, 2025) who has in turn summarised from the DBA (RPS/TetraTech 2024).
- 2.2.2 The site lies within a dynamic landscape that has seen, throughout prehistory, marine inundations and freshwater pooling, resulting in silt deposition and peat formation. The landscape comprised open water and fen, interspersed by islands of higher, dryer ground that were a focus of occupation. There is no evidence for early prehistoric activity in the surrounding area, and it is possible any evidence is sealed at depth.
- 2.2.3 There is evidence for later Iron Age and Roman activity, especially associated with salt production, where brackish tidal water was settled in tanks before boiling in fired clay trays to extract the salt. The residue silt and ash, along with fragments from the trays and pedestals (briquetage) were then dumped, creating silt mounds, or salterns, that are often still visible today. The closest evidence for this is c.200m to the west of the site (Lincolnshire Historic Environment Record reference (LHER). MLI20553), where several roundhouse drip gullies also suggested it was settled. Further late Iron Age and Roman saltmaking activity has been identified c.250m to the southwest (LHER MLI89349), c.400m to the northwest (LHER MLI22638) and c.550 to the west of the site (LHER MLI23204).
- 2.2.4 Roman settlement is noted in the surrounding landscape, attesting to an increase in activity at the time, likely in part due to lower water levels than during the Iron Age (Coles and Hall 1998, 49). The nearest known settlement activity is c.70m to the west of the site (LHER MLI81540); this is recorded as being a probable Romano-British farmstead; however, it is more likely to be associated with the salt making industry.
- 2.2.5 There is no evidence for any early medieval activity in the vicinity of the site. Spalding is believed to have been a Royal Estate in the Saxon period and the placename, first mentioned in c.1074, is an Old English group-name, *Spaldingas*, meaning ‘the people of the Spalde’ (Cameron 1998). The tribal name Spalde is recorded in the 7th/8th century tribute list called the Tribal Hidage (*ibid.*). At the time of the Domesday Book in 1086, the principal landowner was Ivo Tallboys, with smaller estates owned by

Crowland Abbey and 8 Guy of Craon. In total, Spalding was populated by 91 villagers and their dependents, and included a market, fisheries, and salt houses (Morgan and Thorn 1986). The site lies some distance to the west of the historic core of the settlement.

- 2.2.6 A moat and a grange (LHER MLI22356 and MLI94282), c.550m to the northwest, is the nearest known activity of medieval date to the site.
- 2.2.7 The line of the Midland and Great Northern joint railway (MLI20288) which was operational by 1866 is shown to cross the northern half of the site. It was closed by 1965 and has been dismantled, with no evidence of the line surviving across the site.
- 2.2.8 The site has been subjected to several previous archaeological investigations, including a site visit (LHER ELI2391) and subsequent evaluation trenching (LHER ELI2690). Most of the trenches were off site, although two on site (near the eastern and southwestern site boundaries) identified palaeochannels of unknown date and marine flooding episodes.
- 2.2.9 A geophysical survey was undertaken for this proposed development (Taylor 2025). The survey identified a known former field boundary and field boundaries, as well as a possible former drainage dyke.

3. AIMS AND OBJECTIVES

- 3.1.1 The project aims and objectives were defined in the WSI (YA 2025). All recording resulted in *'the preparation of a report and ordered archive'*, in line with the guidelines of the CIfA Chartered Institute for Archaeologists (CIfA 2020)
- 3.1.2 The project aims were as follows:
 - To provide an assessment of the formation processes responsible for the deposit sequences and their development through time, specifically the buried land surface/soil;
 - To determine the location, nature, extent, date, condition, state of preservation, significance and complexity of geoarchaeological and palaeoenvironmental sequences;
 - To aid further evaluation and understanding of the archaeological potential within the site.
- 3.1.3 The project objectives were as follows
 - To undertake test pitting at the site;
 - To record the lithology of the deposits at the site;
 - To recover samples as appropriate for further palaeoenvironmental assessment as deemed appropriate;
 - To produce a report detailing the results of the work and make recommendations.

4. GEOARCHAEOLOGICAL METHODOLOGY

4.1 Fieldwork Methodology

- 4.1.1 In total, nine test pits were located at the ends of evaluation trenches by the monitoring geoarchaeologist using a GNSS, and undertaken by a tracked machine using a toothless bucket. These test pits were excavated up to between 3.00m and 3.50m below ground level or up to trench side collapse. This excavation limit was due to the wet sand-dominated superficial geology limiting the stability of test pit sides. Test pit numbers were given to correspond to the evaluation trench which they were adjacent to *e.g.*, TP12 being adjacent to Tr12.
- 4.1.2 The lithology of the test pits was recorded using the sediment classification system of Troels-Smith (1955). The scheme breaks down a sediment sample into four main components and allows the inclusion of extra components that are also present, but that are not dominant. Key physical properties of the sediment layers are darkness (Da), stratification (St), elasticity (El), dryness of the sediment (Sicc) and the sharpness of the upper sediment boundary (UB). A summary of the sedimentary and physical properties classified by Troels-Smith (1955) is provided in Appendix 1.
- 4.1.3 The descriptive logs (Appendix 2) were supplemented by digital photography carried out using a DSLR with a minimum sensor size of 10 megapixels. All photography adhered to Historic England guidance for *Digital Image Capture and File Storage* (HE 2015b). Graduated metric scales of appropriate lengths were used, ensuring the use of vertical scales used against deep sections in combination with horizontal scales. Digital photographs intended for archive purposes will comply with AAF and ADS guidance (i.e. high quality non-proprietary raw files (DNG) or TIFF images).
- 4.1.4 Deposit modelling was carried out using QGIS where stratigraphic data generated by recorded geoarchaeological interventions was used to create a surface model for sedimentary deposits. Deposit modelling followed procedures set out within the Historic England Guidance for Deposit Modelling and Archaeology (HE 2020).

5. RESULTS

5.1 Lithology and deposit modelling

- 5.1.1 The stratigraphic sequence recorded by all test pits was relatively uniform throughout the site. The lowermost deposit recorded was a bluish grey silty fine sand which gradually transitioned to a brownish yellow colour towards the top of the sedimentary unit. This deposit extended beyond the maximum excavated depth and was recorded up to around 1.00-0.50m BGL (Figure 05; 2.60-1.40m OD). The surface of the lower silty fine sand has been modelled as being around 1.50m OD in the south west and rising steadily to the north east at around TP03 and TP04 up to around 2.60m OD.
- 5.1.2 This fine sand was overlain by a thin horizon of dark brown silty sandy, very well humified and desiccated peat which had a thickness of around 0.02m. This peat was occasionally underlain by around 0.16m of yellowish-grey firm clay which separated it from the underlying fine sand.
- 5.1.3 The firm clay and desiccated peat was overlain by around 0.40-0.50m of further silty sand up to the modern topsoil.

6. DISCUSSION AND CONCLUSIONS

6.1 Overview of lithological sequence

- 6.1.1 The test pits demonstrated a sequence characterised as two broad phases of deposition. The first, lowermost, phase was a silty fine sand which extended beyond the maximum excavated depth and was recorded up to around 1.00-0.50m BGL (2.60-1.40m OD); transitioning from an unoxidised blue to an oxidised brownish yellow towards the top of the sequence.
- 6.1.2 The second phase was reflected in a transition to c.0.16m of firm clay, overlain by a thin silty and sandy, very well humified and desiccated peat which had a thickness of around 0.02m. This peat was overlain by around 0.40-0.50m of silty sand up to the modern topsoil.
- 6.1.3 Both broad phases are viewed as being the result of roddon activity. The lowermost recorded (most extensive) phase is only part of a silty sand deposit which extends to at least 10m deep at the site according the BGS borehole records (Section 1.2.5; TF22SW159) and has locally (100m away) been shown to extend to beyond 15m deep (Section 1.2.6; TF22SW158).
- 6.1.4 The overlying sediments are likewise viewed as being the result of roddon deposition during a separate, later phase. The silty sandy desiccated peat is interpreted as being deposition within these roddon features during a period of relative terrestrialisation. Stratigraphically, the peat is viewed as relating to the Nordelph peat phase, given that it overlies earlier phase of roddon activity (Barroway Drove beds). The peat is interpreted as part of the end of the second phase of roddon activity as recorded in interventions in the evaluation trenches the peat was within discrete channel features (Plate 10); possibly representing a brief or curtailed phase of paludification before further marine transgression.

6.2 Deposit survival and existing impacts

- 6.2.1 The site itself has experienced relatively limited apparent anthropogenic truncation; with the uppermost 0.30-0.40m being recent topsoil and no evidence for deeper human impacts.

- 6.2.2 The recorded sequence consists almost entirely of roddon deposits which have been shown to extend to over 15m below the modern surface. There remains the potential, stratigraphically, for organic deposits in the form of the Lower Peat or Pleistocene fluvial gravels to be present beneath the silty sand roddon sediments. However, if these sediments are still present at the site then they are at considerable depth and may have been truncated by fluvial incision which led to the creation of the roddons.
- 6.2.3 The peat that is recorded at the site is highly degraded and desiccated likely as a result of modern agricultural practices (Smith *et al.* 2010). This deposit is extremely thin indicating either a very short duration for accumulation or that the upper sequence has been truncated by subsequent transgression episodes. The poor condition of the deposit, as well as its thinness, limits its palaeoenvironmental and archaeological potential.

6.3 Discussion of deposits

- 6.3.1 The sediments recorded at the site consist of roddon formations during two separate phases. The first phase is represented by considerable thicknesses of silty fine sands which extend to at least 10m BGL at the site as recorded by the BGS (Section 1.2.5; TF22SW159) and has locally been shown to extend to beyond 15m BGL (Section 1.2.6; TF22SW158). Regional Lidar imagery (Figure 03) demonstrates that the area around the site is located at the confluence of multiple, large, roddon channel systems which extend throughout the wider landscape. These roddon channel systems “*formed a network of freshwater creeks which drained the region towards an estuary in the vicinity of Spalding*” (Hayes and Lane, 1992. pp. 205). This estuary not only drained smaller palaeo-creeks, but also likely including river systems including the River Welland. The East Anglian Archaeology Fenland Project undertook a survey in the Lincolnshire South-West Fens (Hayes and Lane, 1992) that included mapping of these creeks, which became roddons, alongside outlining their environmental history. Although ceasing to the south west of Spalding, the mapping illustrates the edge of this large estuary which is mentioned above.
- 6.3.2 Regional Lidar mapping illustrates the surface expression of what was once this system, including the large estuarine trunk which extends north east into Spalding (Figures 03 and 04). The site is located within the boundaries of this ancient estuary, which deposited over 15m of fine silty sand that extends beyond any local BGS borehole within the vicinity of the site. The Fenland Project (Hayes and Lane, 1992) demonstrate how the creek systems, as well as the large estuary at Spalding, are the product of drainage during the mid-2nd millennium BC (Figure 04).
- 6.3.3 These channels were incised into the Barroway Drove Beds; with the earliest recognised roddon generation being incised into the upper surface of the lower Barroway Drove Bed deposits, and the second generation being incised into the upper surface of the upper Barroway Drove Bed deposits (Smith *et al.* 2010). Which of these generations the sediments found at Spalding Common pertain to is difficult to determine as the creek system is likely to have localised differences from the regional model.
- 6.3.4 The desiccated sandy peat overlying the lower roddon deposits is viewed as relating to the Nordelph peat due to post-dating the deposition of mid-2nd millennium BC roddon deposits (Section 6.3.2). This Nordelph peat has been dated regionally to between 2060-1920 cal BC and 200-40 cal BC and has been demonstrated to overlie roddon features; notably the roddon at Must Farm (Smith *et al.* 2012).
- 6.3.5 The peat has been demonstrated at the site to have been overlain by subsequent inorganic roddon deposition by relatively small creek-like channels. Such channels

have been captured and recorded in section within the archaeological evaluation trenches.

- 6.3.6 The roddons represent former watercourses of the Fens which became progressively exposed during the last century as overlying peat has been stripped away by desiccation and modern agricultural practices (Smith *et al.*, 2010). The roddon sediments themselves have limited intrinsic archaeological and palaeoenvironmental potential due to the highly oxidised nature of the sediments. The fills of these former channels are inorganic in composition and with limited evidence for permanent water saturation. The primary archaeological association with roddons is in the form of cut archaeological features, where past occupation has taken advantage of the higher elevation created by these features.
- 6.3.7 More considerable archaeological association with roddons can be found at the Must Farm site near Whittlesey, Cambridgeshire. This site revealed waterlogged Bronze Age settlement in a state of unique preservation, containing finds of national significance. However, importantly, this site was recorded within a considerable later freshwater late-stage fluvial channel, rather than the roddon itself. This later freshwater channel had cut an earlier roddon, which itself had truncated Barroway Drove, Lower Peat, and Pleistocene gravels (Smith *et al.* 2012). A similar, large overlying freshwater channel of (and associated waterlogging) has not been recorded at this site.

6.4 Consideration of research aims

- 6.4.1 This investigation has addressed the project aims and objectives (Sections 3.1.1-3.1.2) in providing an insight into the formation processes responsible for the depositional sequences present at the site, their distribution, and an indication as to the significance of said sequences.
- 6.4.2 The recorded superficial geology consists of two separate instances of roddon deposition, the lower of which has formed extensive inorganic sand-dominated deposits which were deposited by a large estuarine channel which drained numerous freshwater creeks and palaeochannels during the mid-2nd millennium BC (Sections 6.3.1-6.3.2). These are of limited intrinsic archaeological and palaeoenvironmental potential. Likewise, the thin (Nordelph) peat horizon recorded within the upper roddon sequence is of limited archaeological and palaeoenvironmental potential due to the poor state of preservation and lack of significant depth.

6.5 Potential impacts

- 6.5.1 The proposed development encompasses the construction of a residential development at the site. Although the impacts from this development may be considerable, they are unlikely to impact deposits of archaeological or palaeoenvironmental significance. The sedimentary sequence is characterised by sand-dominated roddon deposits which were predominantly deposited by a large estuarine system which has formed over 15m of sandy sediment. Overlying this is a second phase of roddon deposition which contains a peat horizon pertaining to the Nordelph Peat. This peat has already become desiccated and degraded and is presently of limited archaeological and palaeoenvironmental potential.
- 6.5.2 If deposits of greater intrinsic archaeological and palaeoenvironmental potential are present at the site, they would lie at great depth below the lower roddon deposits and be insulated from any potential impact.

6.6 Conclusions

- 6.6.1 Nine geoarchaeological test pits were excavated at the ends of trenches at the site of a prospective residential development. These interventions demonstrated a sequence characterised as two broad phases of roddon activity.

- 6.6.2 The area around the site is located at the confluence of multiple, large, roddon channel systems which extend throughout the wider landscape (Figures 3 and 4). Regional Lidar mapping illustrates the surface expression of what was once this system, including the large estuarine trunk which extends north east into Spalding (Figures 03 and 04). The site is located within the boundaries of this ancient estuary, which deposited over 15m of fine silty sand that extends beyond any local BGS borehole within the vicinity of the site. The Fenland Project (Hayes and Lane, 1992) demonstrate how the creek systems, as well as the large estuary at Spalding, are the product of drainage during the mid-2nd millennium BC (Figure 04). The lower, first phase of sedimentation at the site reflects deposition by these mid-2nd millennium creek and estuarine systems.
- 6.6.3 The desiccated sandy peat overlying the lower roddon deposits is viewed as pertaining to the Nordelph peat due to it post-dating the deposition of mid-2nd millennium BC roddon deposits. Overlying this are further inorganic roddon deposits relating to later Holocene deposition within small freshwater channels.
- 6.6.4 The roddon sediments themselves have limited intrinsic archaeological and palaeoenvironmental potential. Likewise, the thin (Nordelph) peat horizon recorded within the upper roddon sequence is of limited archaeological and palaeoenvironmental potential due to the poor state of preservation. Although the impacts from this development may be considerable, they are unlikely to impact deposits of archaeological or palaeoenvironmental significance.

REFERENCES

- Allen Archaeology 2025. Specification for a programme of archaeological evaluation by trial trenching: Land off Meadow Way, Spalding, Lincolnshire.
- British Geological Survey (BGS). 2025. *Geology of Britain Viewer*. [Online] <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> [Accessed 09/08/2024].
- Brown, D. H 2007. *Archaeological archives*. Reading: Institute of Field Archaeologists. [Online] <https://archaeologydataservice.ac.uk/library/browse/details.xhtml?recordId=3001775> [Accessed 15/02/2024].
- Chartered Institute for Archaeologists 2022 *Code of Conduct*. Reading: Chartered Institute for Archaeologists.
- Chartered Institute for Archaeologists (CIfA) 2022 *Toolkit for Selecting Archaeological Archives* Reading: Chartered Institute for Archaeologists.
- Chartered Institute for Archaeologists (CIfA) 2023b Universal guidance for archaeological field evaluation. Reading: Chartered Institute for Archaeologists.
- Coles J., Hall D., 1998, *Changing Landscapes: The Ancient Fenland*. Cambridgeshire County Council and Wetland Archaeology Research Project
- Department of Levelling Up, Housing and Communities 2024 National Planning Policy Framework (NPPF). London: Department of Levelling Up, Housing and Communities.
- FAME. 2006. Health & Safety in Field Archaeology Manual FAME.
- Historic England. 2006, Management of Recording Projects in the Historic Environment (MoRPHE). Swindon. Historic England.

- Historic England. 2015a. Geoarchaeology: Using earth sciences to understand the archaeological record. Swindon. Historic England.
- Historic England. 2015b. Digital Image Capture and File Storage: A guide to best practice. Swindon. Historic England.
- Historic England. 2015c. Waterlogged Wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood. Swindon. Historic England.
- Historic England. 2016. Preserving archaeological remains: Decision-taking for sites under development. Swindon. Historic England.
- Historic England. 2017. *Understanding the Archaeology of Landscapes*. Swindon. Historic England.
- Historic England. 2020. Deposit Modelling and Archaeology: Guidance for mapping buried deposits. Swindon. Historic England.
- Historic England. 2022. Radiocarbon Dating and Chronological Modelling: guidelines and best practice. Swindon. Historic England.
- Historic England. 2025. Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (third edition). Swindon. Historic England
- Hughes, A., Gyllencreutz, R., Øystein, L., Mangerud, J., Svendsen, J. 2016. The last Eurasian ice sheets- a chronological database and time-slice reconstruction, DATED-1. *Boreas* 45(1), 1-45.
- Morgan P., Thorn C., (eds.). 1986. *Domesday Book: vol.31: Lincolnshire*, Phillimore & Co. Ltd, Chichester.
- Neal, V and Watkinson, D (eds). 1998. *First Aid for Finds: Practical Guide for Archaeologists*. 3rd Revised edn. United Kingdom Institute for Conservation of Historic & Artistic Works, Archaeology Section.
- RPS/TetraTech 2024. Desk based heritage assessment: Land off Meadow Way, Spalding.
- Schoch, W., Heller, I., Schweingruber, F.H. and Kienast, F. 2004. *Wood Anatomy of Central European Species*. Online version: www.woodanatomy.ch.
- Schweingruber, F.H. 1990. *Macroscopic Wood Anatomy* (3rd ed). Birmensdorf: Swiss Federal Institute for Forest, Snow and Landscape Research.
- Smith, D., Zalasiewicz, J., Williams, M., Wilkinson, I., Redding, M., Begg, C. 2010. Holocene drainage systems of the English Fenland: Roddons and their environmental significance. *Proc. of the Geol. Soc.* 121, 256-269.
- Smith, D., Zalasiewicz, J., Williams, M., Wilkinson, I., Scarborough, J., Knight, M., Sayer, C., Redding, M., Moreton, S. 2012. The anatomy of a Fenland roddon: Sedimentation and environmental change in a lowland Holocene tidal creek environment. *Proc. of the Geol. Soc.* 59(2), 145-159.
- Taylor, D., 2025. Geophysical Survey Report. Land off Meadow Way, Spalding, Lincolnshire. Magnitude Surveys Ltd Ref: MSTF2133.
- Troels-Smith, J. 1955. Karakterisering af lose jordarter (characterisation of unconsolidated sediments). *DenmarksGeologiskeUndersogelse*, Series IV/3, 10, 73.

APPENDIX 1. TROELS-SMITH

Darkness	Degree of Stratification	Degree of Elasticity	Degree of Dryness
nig.4 black	strf.4 well stratified	elas.4 very elastic	sicc.4 very dry
nig.3	strf.3	elas.3	sicc.3
nig.2	strf.2	elas.2	sicc.2
nig.1	strf.1	elas.1	sicc.1
nig.0 white	strf.0 no stratification	elas.0 no elasticity	sicc.0 water

	Sharpness of Upper Boundary
lim.4	< 0.5mm
lim.3	< 1.0 & > 0.5mm
lim.2	< 2.0 & > 1.0mm
lim.1	< 10.0 & > 2.0mm
lim.0	> 10.0mm

	Sh	Substantia humosa	Humous substance, homogeneous microscopic structure
I Turfa	Tb	T. bryophytica	Mosses +/- humous substance
	Tl	T. lignosa	Stumps, roots, intertwined rootlets, of ligneous plants
	Th	T. herbacea	Roots, intertwined rootlets, rhizomes of herbaceous plants
II Detritus	DI	D. lignosus	Fragments of ligneous plants >2mm
	Dh	D. herbosus	Fragments of herbaceous plants >2mm
	Dg	D. granosus	Fragments of ligneous and herbaceous plants <2mm >0.1mm
III Limus	Lf	L. ferrugineus	Rust, non-hardened. Particles <0.1mm
IV Argilla	As	A. steatodes	Particles of clay
	Ag	A. granosa	Particles of silt
V Grana	Ga	G. arenosa	Mineral particles 0.6 to 0.2mm
	Gs	G. saburralia	Mineral particles 2.0 to 0.6mm
	Gg(min)	G. glareosa minora	Mineral particles 6.0 to 2.0mm
	Gg(maj)	G. glareosa majora	Mineral particles 20.0 to 6.0mm
	Ptm	Particulaetestaemollosorum	Fragments of calcareous shells

Physical and sedimentary properties of deposits according to Troels-Smith (1955)

APPENDIX 2 – TEST PIT LOGS

Borehole Number	Depth (m BGL) upper	Depth (m BGL) lower	Da	St	El	Sicc	UB	Troels-Smith Texture	Description
TP01- easting: 523664.51 northing: 321647.91 elevation: 2.87m OD									
TP01	0	0.34	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP01	0.34	0.72	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP01	0.72	0.74	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP01	0.74	3.3	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand
TP02- easting: 523659.25 northing: 321613.42 elevation: 3.06m OD									
TP02	0	0.34	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP02	0.34	0.66	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP02	0.66	0.68	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP02	0.68	0.98	3	4	0		4	As4	Firm yellowish grey clay
TP02	0.98	2.52	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand
TP03- easting: 523748.10 northing: 321652.78 elevation: 3.08m OD									
TP03	0	0.36	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP03	0.36	0.54	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP03	0.54	0.56	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP03	0.56	3.36	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand
TP04- easting: 523730.37 northing: 321580.69 elevation: 2.95m OD									
TP04	0	0.34	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP04	0.34	0.52	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP04	0.52	0.54	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP04	0.54	3.45	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand
TP05- easting: 523694.13 northing: 321565.49 elevation: 3.04m OD									
TP05	0	0.38	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP05	0.38	0.78	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP05	0.78	0.8	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP05	0.8	3.04	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand
TP06- easting: 523614.63 northing: 321528.28 elevation: 2.98m OD									
TP06	0	0.28	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP06	0.28	0.72	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP06	0.72	0.74	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP06	0.74	0.92	3	4	0		4	As4	Yellowish grey firm clay

TP06	0.92	3.22	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand
TP07- easting: 523671.90 northing: 321494.57 elevation: 3.11m OD									
TP07	0	0.34	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP07	0.34	0.78	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP07	0.78	0.8	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP07	0.8	0.96	3	4	0		4	As4	Yellowish grey firm clay
TP07	0.96	3.04	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand
TP10- easting: 523586.57 northing: 321531.59 elevation: 3.20m OD									
TP10	0	0.32	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP10	0.32	0.76	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP10	0.76	0.78	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP10	0.78	0.92	3	4	0		4	As4	Yellowish grey firm clay
TP10	0.92	3.1	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand
TP12- easting: 523503.96 northing: 321518.14 elevation: 2.73m OD									
TP12	0	0.32	4	2	0			Ag2, As2	Dark brown clayey silt topsoil
TP12	0.32	0.76	3	4	0	4	3	Ga3, Ag1	Brownish yellow silty sand
TP12	0.76	0.78	4	2	0	4	4	Sh2, As1, Ga1	Dark brown silty sandy very well humified peat
TP12	0.78	0.94	3	4	0		4	As4	Yellowish grey firm clay
TP12	0.94	2.94	3	4	0		4	Ga3, Ag1	Brownish yellow, becoming bluish grey silty fine sand

FIGURES

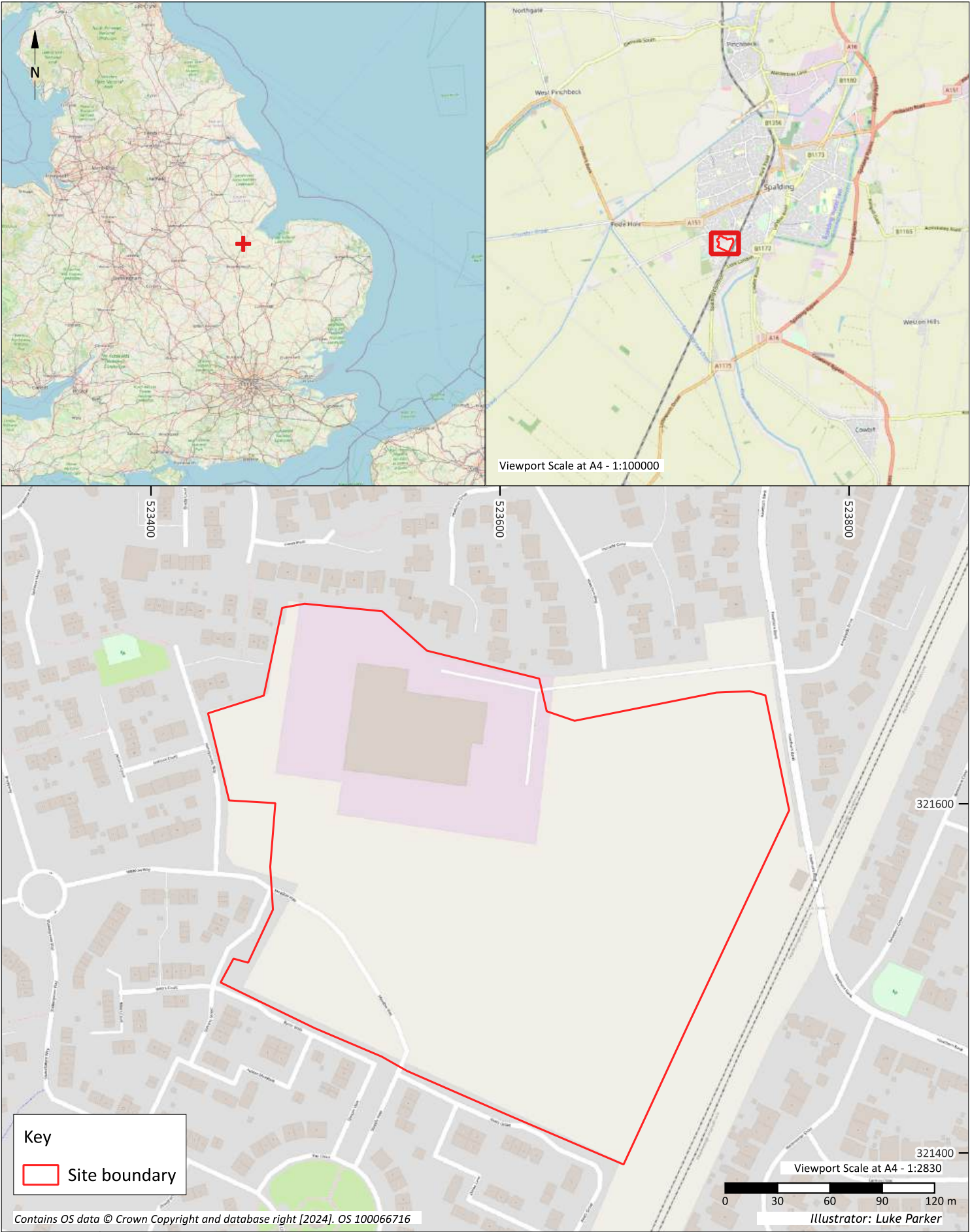


Figure 01 - Location Map
10702 - Spalding Common, Lincolnshire GA

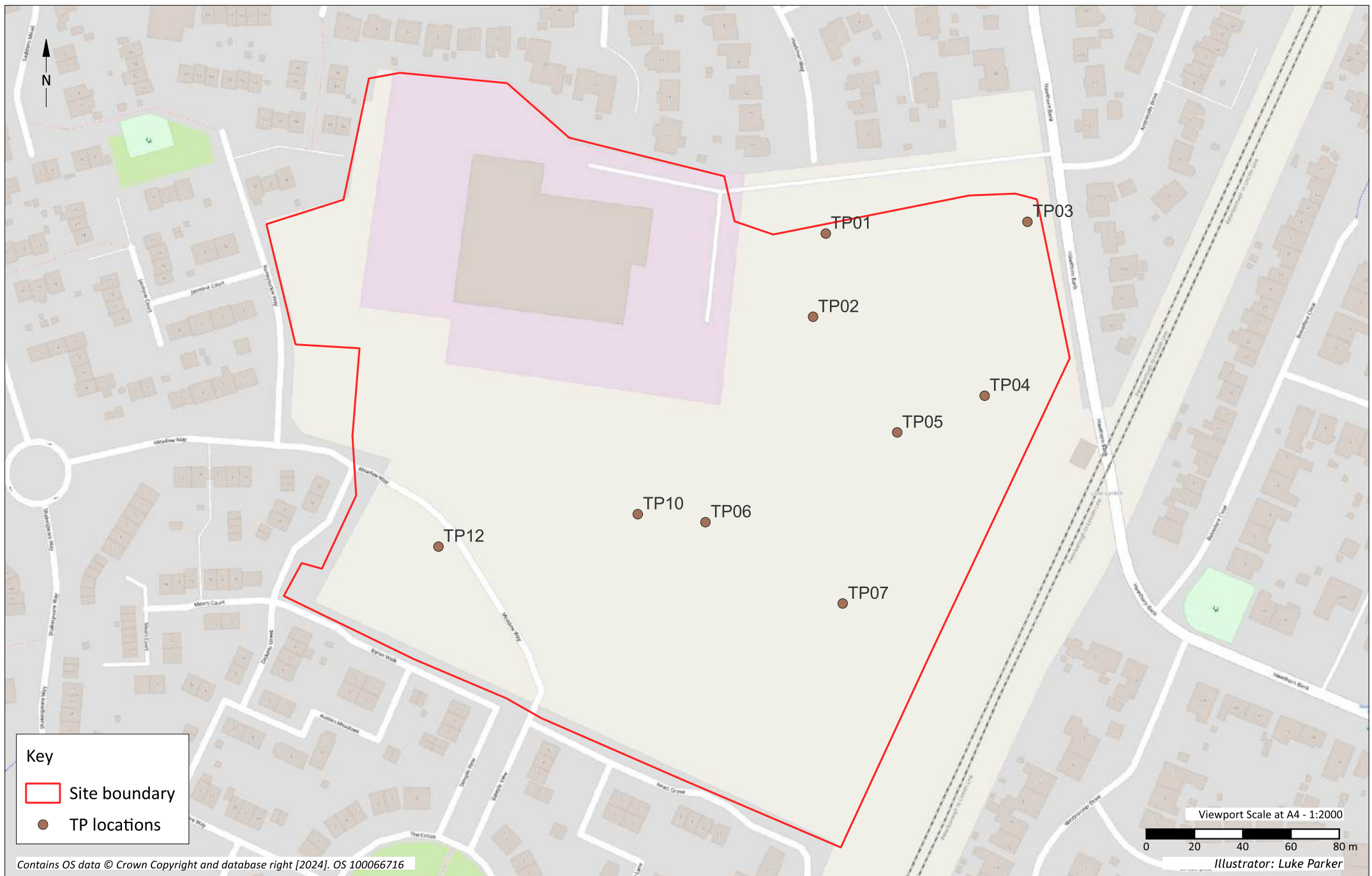


Figure 02 - Intervention Locations
10702 - Spalding Common, Lincolnshire GA

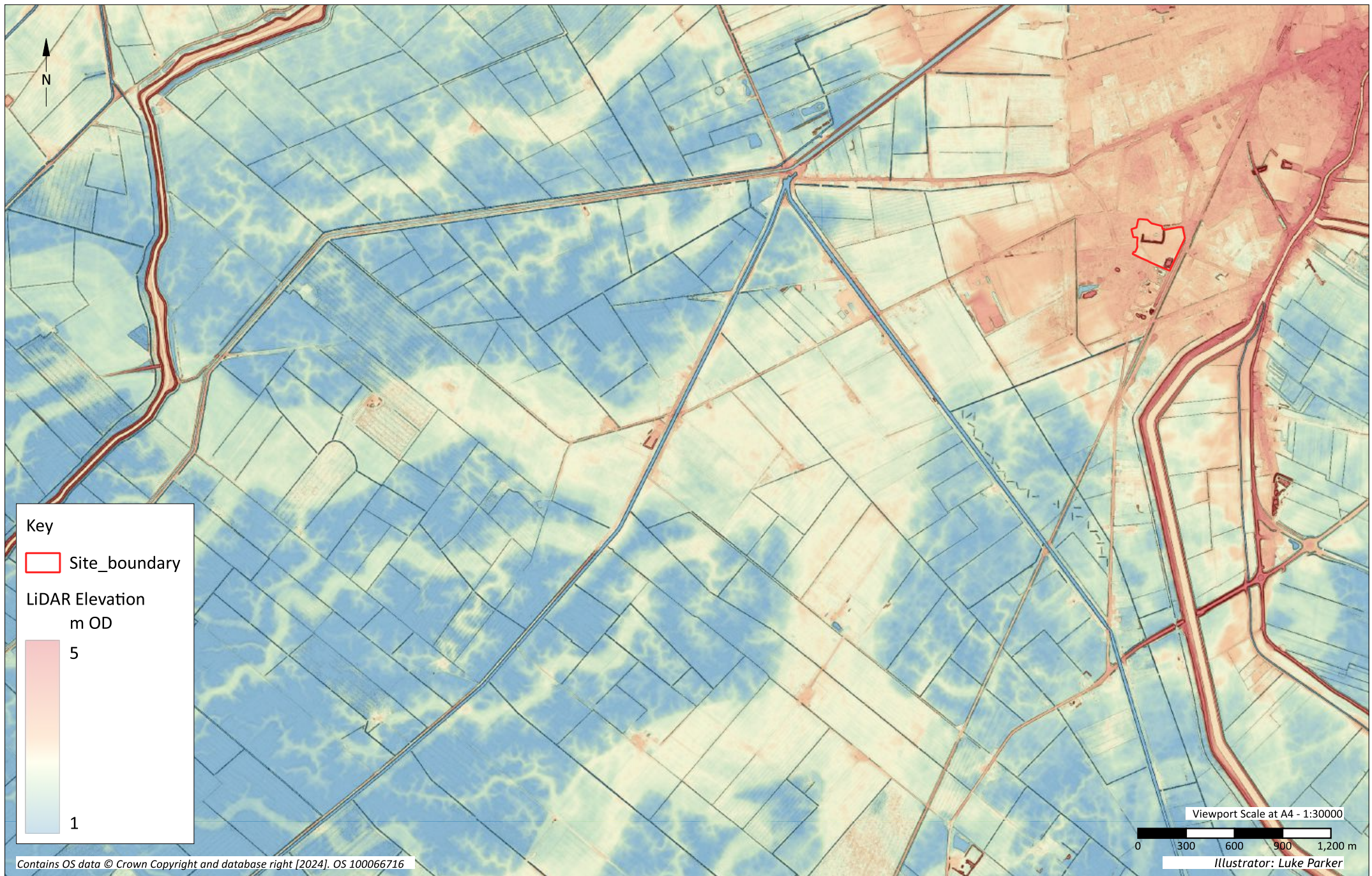
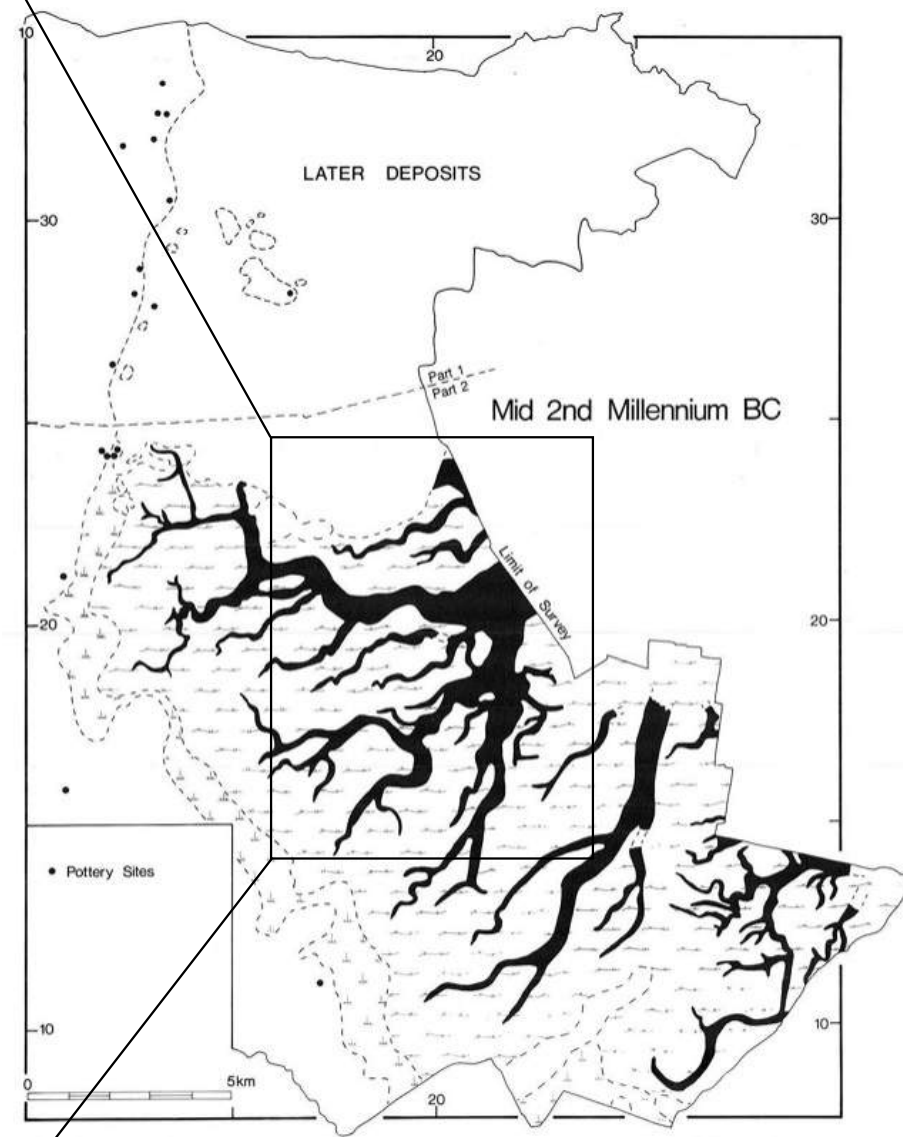
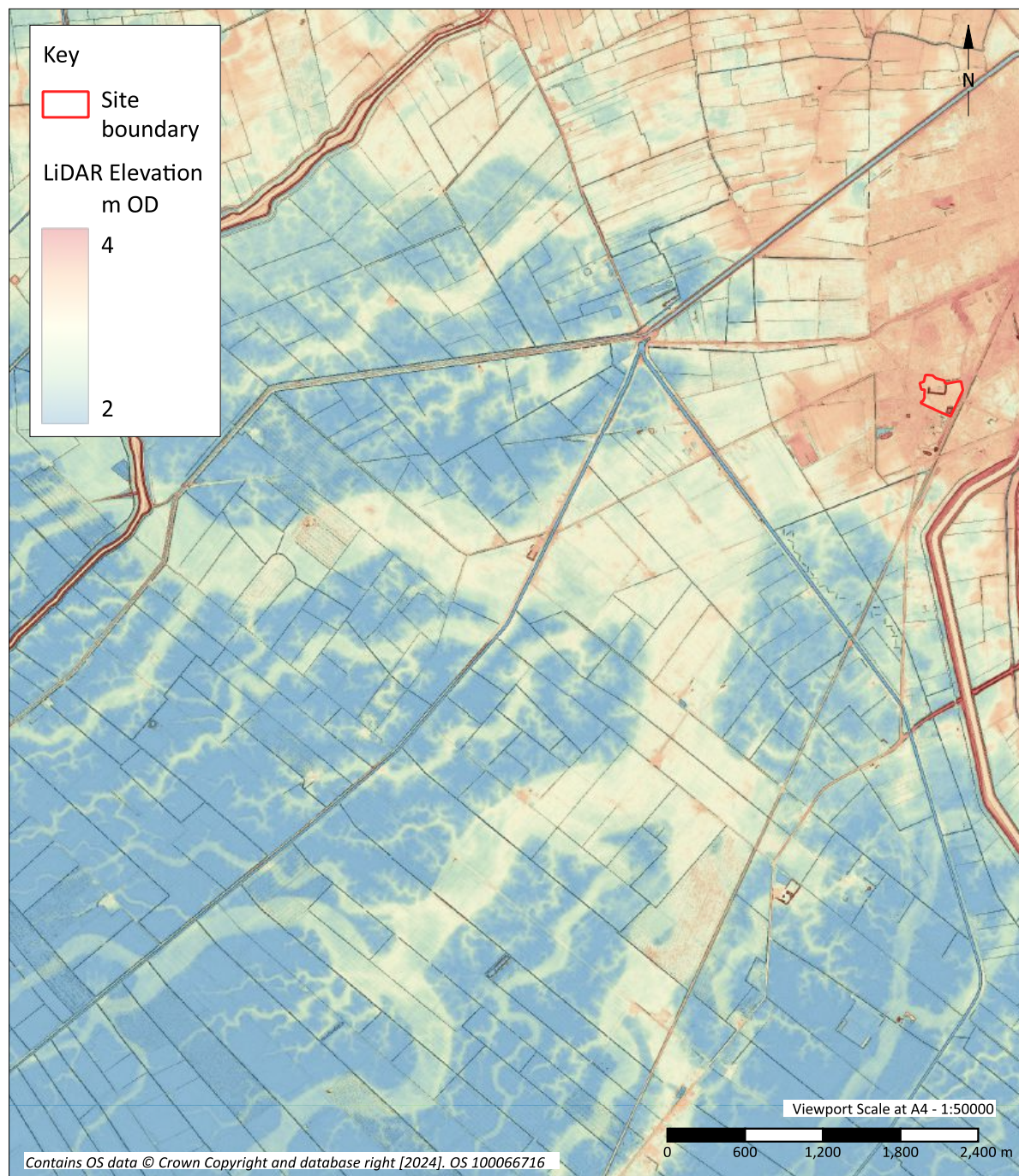


Figure 03 - Regional LiDAR model
10702 - Spalding Common, Lincolnshire GA



Illustrator: Luke Parker



Figure 04. Regional LiDAR w/ mid-2nd Millennium BC roddon network
10702 - Spalding Common, Lincolnshire GA

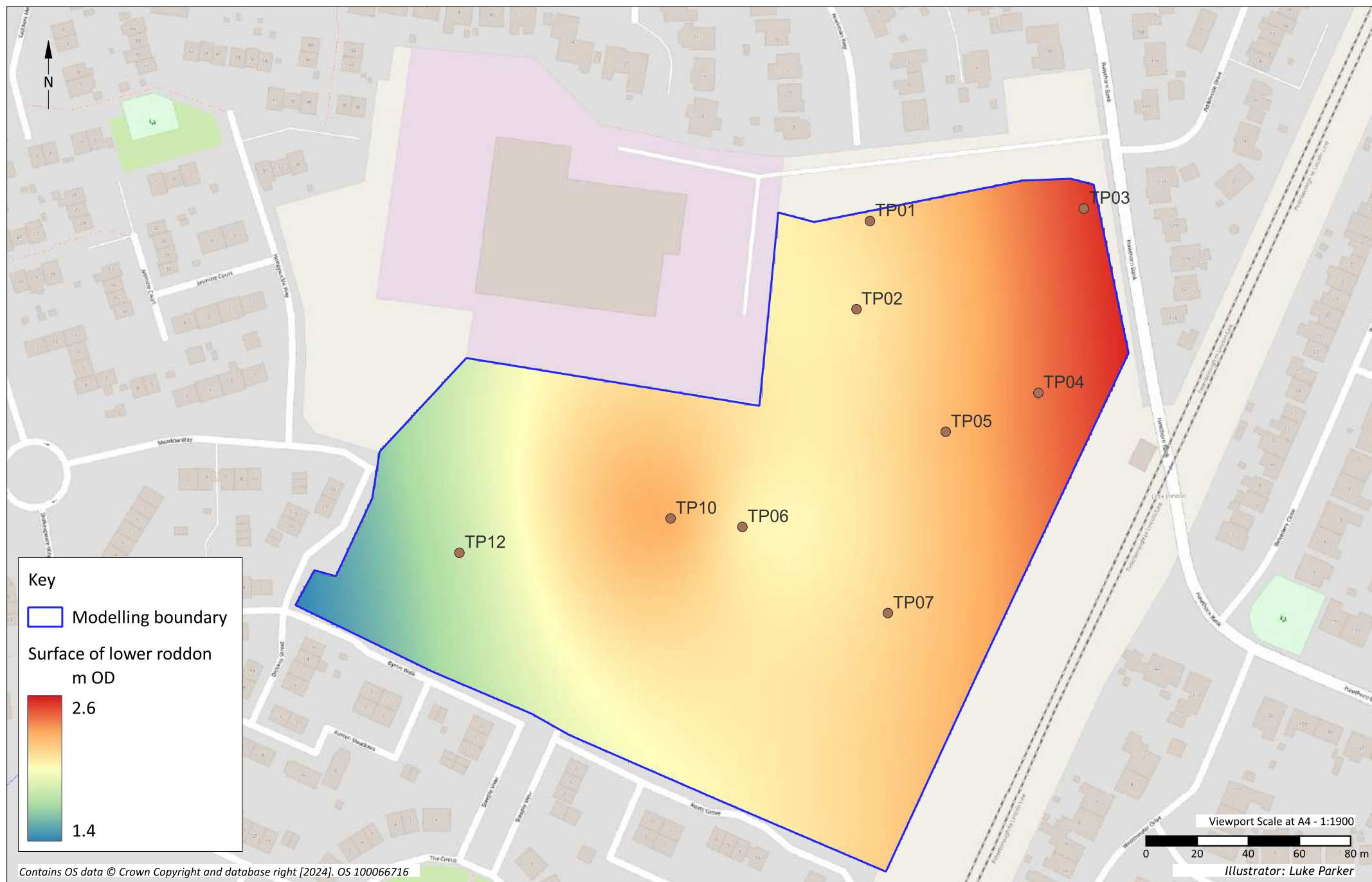


Figure 05 - Surface model of lower roddon
10702 - Spalding Common, Lincolnshire GA



Plate 01. Shot of TP01



Plate 02. Shot of TP02



Plate 03. Shot of TP03



Plate 04. Shot of TP04



Plate 05. Shot of TP05



Plate 06. Shot of TP06



Plate 07. Shot of TP07



Plate 08. Shot of TP10



Plate 09. Shot of TP12



Plate 10. Shot of evaluation trench section showing second, upper, phase of roddon deposition



Allen Archaeology Limited
www.allenarchaeology.co.uk

Company Registered in England and Wales No: 6935529

Lincoln
Whisby Lodge
Hillcroft Business Park
Whisby Road
Lincoln
Lincolnshire
LN6 3QL

T: +44 (0) 1522 685356
E: info@allenarchaeology.co.uk

West
Arion Business Centre
Harriet House
118 High Street
Birmingham
B23 6BG
T: +44 (0) 800 610 2545
E: birmingham@allenarchaeology.co.uk

South
International House
Southampton International Business
Park
George Curl Way
Southampton
SO18 2RZ

T: +44 (0) 800 610 2555
E: southampton@allenarchaeology.co.uk

East
Wellington House
East Road
Cambridge
Cambridgeshire
CB1 1BH
T: +44 (0) 800 610 2550
E: cambridge@allenarchaeology.co.uk

Northwest
Office 4
Barbury House,
8 Hardy Close,
Nelson Court Business Centre,
Preston,
PR2 2XP

T: +44 (0) 1772 963039
M: +44 (0) 7710 099052
E: northwest@allenarchaeology.co.uk