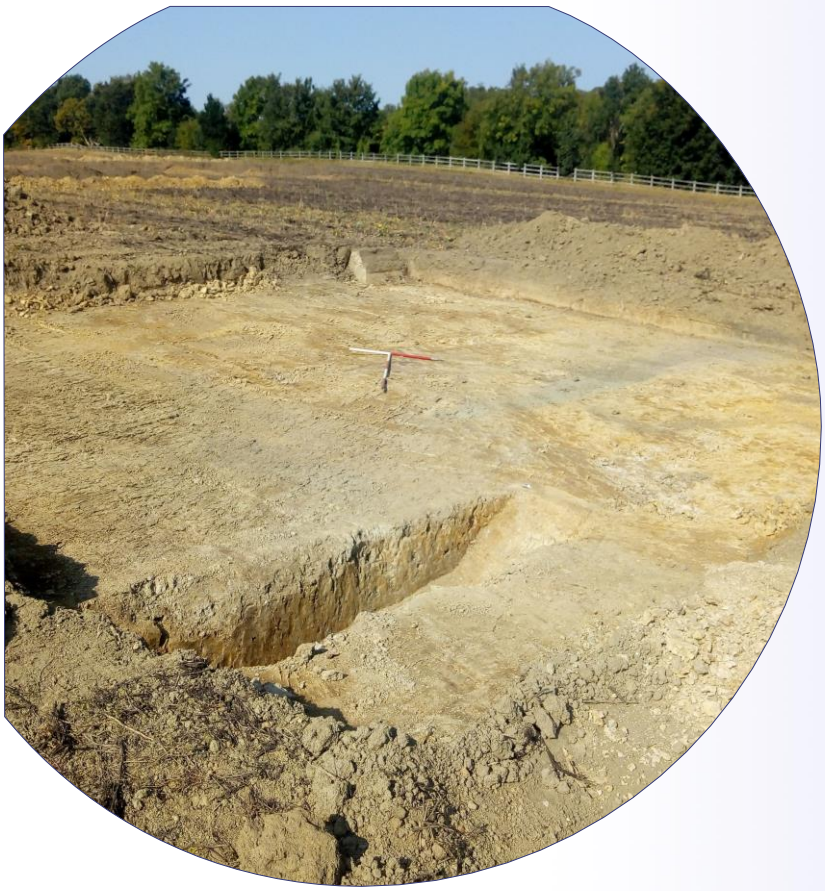

Newmarket Lane, Methley, West Yorkshire

Archaeological Evaluation Report

November 2020

Client: The Environment Partnership

Issue No: V. 1
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Newmarket Lane, Methley, West Yorkshire

Archaeological Evaluation Report

Written by Helen Stocks-Morgan

With contributions from Denise Druce and illustrations by Mark Tidmarsh

Contents

List of Figures

List of Plates

Plate 25 South-east-facing section of ditch ***2604***, scale 1m

Summary

Oxford Archaeology (OA) North was commissioned by The Environment Partnership (TEP) to undertake a trial trench evaluation at a site of a proposed storage/distribution warehouse with ancillary offices, new access arrangements from the existing employment estate road, vehicular parking and hardstanding yards, drainage, landscaping and associated infrastructure and engineering works north of Newmarket Lane, Methley, West Yorkshire (NGR SE 436671 425692).

The work was undertaken to inform the Planning Authority in advance of a submission of a Planning Application. A specification was set by West Yorkshire Archaeology Advisory Service (WYAAS) for a pre-determination archaeological evaluation by trial trenching and a written scheme of investigation was produced by TEP detailing the Local Authority's requirements for work necessary to inform the planning process. OA North were subsequently commissioned by TEP to undertake the archaeological fieldwork required, which was undertaken between 14th September and 2nd October 2020.

In total, 76 fifty metre evaluation trenches were to be excavated across the seven fields of the proposed development. However, only 75 trenches could be excavated, the proposed location of Trench 73 was too close to overhead powerlines and could not be moved to the south due to its proximity to Trench 74.

Archaeological remains were identified in 22 of the trenches, the remaining trenches were either blank, contained natural features or furrows. The archaeological remains in the eastern halves of Field 3 and 5 corresponded well with the geophysical survey results, which had highlighted areas of strong archaeological potential in these areas. The remains identified in Trenches 49, 51, and 56 in Field 3 were suggestive of a possible enclosure, which likely enclosed ring features, as seen in Trench 52. The remains identified in Trenches 70 and 71 in Field 5 were suggestive of a substantial enclosure, with the remains in Trench 70 displaying evidence of possible internal divisions to this enclosure.

None of the remains identified contained much in the way of dating evidence, however, there was presence of charred plant remains and charcoal within archaeological features which were sampled for palaeoenvironmental remains. There was also evidence for hammerscale, recovered from a possible occupation layer in Trench 46, which might suggest that metal working had been undertaken in the vicinity of that trench. Although there was no dating evidence recovered from the features identified, their form appears to be similar to that of late prehistoric or Romano-British features encountered elsewhere.

Acknowledgements

Oxford Archaeology (OA) North would like to thank Sarah Hannon-Bland of The Environment Partnership (TEP) for commissioning this project. Thanks are also extended to David Hunter of West Yorkshire Archaeological Advisory Service (WYAAS), who monitored the work on behalf of Wakefield Metropolitan Borough Council.

The project was managed for OA North by Paul Dunn. The fieldwork was directed by Helen Stocks-Morgan, who was supported by Bryan Antoni, Lauren Basnett, Zoe Clarke, Alicia Senelle and Holly Wright. Survey and digitising was carried out by Helen Stocks-Morgan, with illustrations produced by Mark Tidmarsh. Thanks are also extended to the teams of OA staff that processed the environmental remains under the supervision of Karen Barker and Denise Druce.

1 INTRODUCTION

1.1 Scope of work

1.1.1 Oxford Archaeology (OA) North was commissioned by The Environment Partnership (TEP) to undertake a trial trench evaluation at a site of a proposed storage/distribution warehouse with ancillary offices, new access arrangements from the existing employment estate road, vehicular parking and hardstanding yards, drainage, landscaping and associated infrastructure and engineering works north of Newmarket Lane, Methley, West Yorkshire (NGR SE 436671 425692; Fig 1).

1.1.2 The work was undertaken to inform the Planning Authority in advance of a submission of a Planning Application. A specification was set by West Yorkshire Archaeology Advisory Service (WYAAS) for a pre-determination archaeological evaluation by trial trenching and a written scheme of investigation was produced by TEP detailing the Local Authority's requirements for work necessary to inform the planning process. OA North were subsequently commissioned by TEP to undertake the archaeological fieldwork required, which was undertaken between 14th September and 2nd October 2020. This document outlines how OA implemented the specified requirements.

1.2 Location, topography and geology

1.2.1 The site lies approximately 6km to the north-east of Wakefield (centred on SE 436671 425692; Fig 1), to the south of the M62 motorway and north of Newmarket Lane. The site consisted of an undulating, irregular-shaped plot, of approximately 20 hectares. This area broadly slopes from west to east, with elevations between 50m OD to 30m OD.

1.2.2 The geology of the area is mapped by the British Geological Survey (BGS), with bedrock comprising the Pennine Middle Coal Measures, of Carboniferous age, underlying the site. A drift map of the area shows sporadic deposits of till, possibly some alluvium and possible occurrence of undifferentiated river terrace deposits in the general area, but there is an obvious absence of mapped superficial deposits (Giles 1988, Fig. 8, p. 25). An area of made ground has been identified south/south-east of the area and is believed to be related to earlier coal mining activity (BWB 2017). No evidence has been recorded for the presence of superficial deposits across the remainder of the proposed development (BWB 2017).

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background of the site is described in detail in the WSI (*Appendix A*), however, a brief summary is provided here.

1.3.2 ***Palaeolithic***: the site falls within a 1km radius of the former glacial Lake Humber, thought to have been in place between 14,650 BC and 9150 BC. It has been suggested that human subsistence activity in the form of hunter-gathering was focused at the wetland edge of the lake. A geoarchaeological assessment (OA North 2020) of historic boreholes within the site did not reveal evidence of lacustrine sediments, which would indicate the presence of the former lake. However, boreholes to the north and east of

the site did record possible glacial till deposits, which may indicate post-glacial meltwater deposits in the study area. A geophysical survey (Magnitude Surveys 2020) indicated a possible palaeochannel in the north-east part of the site.

1.3.3 ***Mesolithic***: West Yorkshire has the highest density of Mesolithic sites in England, and the area with the most potential for future discoveries remains primarily in areas of peat, at elevations of approximately 380 m aOD and 430 m aOD. However, there are fewer artefacts from the east of the region and the geoarchaeological assessment did not reveal any evidence for areas of peat or deposits considered likely to contain Mesolithic remains (OA North 2020).

1.3.4 ***Neolithic***: evidence of Neolithic activity is widespread across West Yorkshire, with finds of stone axes being recorded at sites near river valleys, also utilised during the Mesolithic. These axes have mainly been recovered near the River Calder, to the south of the site. To the east of the site, adjacent to the A1, is the Scheduled Monument of Ferrybridge Henge. There is also another Scheduled Monument in the vicinity of the site, Castle Hill in Almondbury, which demonstrates that sites in the region dating from the prehistoric period are repeatedly returned to over thousands of years.

1.3.5 ***Bronze Age***: activity would have likely continued in and around the same locations as before, as demonstrated by the early Bronze Age round barrows located around the earlier henge site at Ferrybridge. Evidence of round barrows tend to survive only as ring ditches on the Coal Measures geology, which underlies this site. By the Middle Bronze Age, extensive woodland clearance had been undertaken to create more arable and pastoral land.

1.3.6 ***Iron Age and Romano-British period***: the arable and pastoral land created during the Middle to Late Bronze Age continued to be used and expanded upon. Several palisaded enclosures are known to have been constructed in the Late Bronze Age and Iron Age in West Yorkshire. Also earlier linear boundary features continued to be used during the Iron Age and Romano-British periods.

1.3.7 A number of sites are recorded within the West Yorkshire HER, within the 1km study area of the development. These likely date to the Late Iron Age and Romano-British periods, comprising cropmarks. Three of these are located to the south of Newmarket Lane, with two nearby sites to the west of the former Newmarket Colliery site. The geophysical survey undertaken by Magnitude Surveys (2020) identified a pentagonal enclosure, within which were several semi-circular enclosures and pits, along with two possible trackways. An additional large rectangular enclosure with internal subdivisions was recorded in the south-east of the development site.

1.3.8 ***Early Medieval and Medieval***: Methley is first mentioned in the 1086 Domesday survey as Medelai, derived from the Old English and interpreted to mean ‘a clearing in a wooded area between two rivers’. Farming settlements are likely to have continued from those set out in the Romano-British period. There is evidence of the use of the open field farming system within the development site and the wider study area in the form of ridge and furrow, confirmed by the geophysical survey (Magnitude 2020).

1.3.9 ***Post-medieval***: the study area continued to contain small dispersed settlement areas within an agricultural and woodland setting. Inclosure was carried out in the

surrounding area in the post-medieval period, with the open fields being divided up into eight fields.

1.3.10 The underlying Coal Measures geology was exploited domestically since at least the fourteenth century, however, the industrial extraction of coal increased during the post-medieval period. Several collieries were set up in the study area, including the Newmarket Colliery to the west and south-west of the development.

2 AIMS AND METHODOLOGY

2.1 Aims

2.1.1 The project aims and objectives were as follows:

i. To adhere to and fulfill the agreed programme of works associated with the archaeological potential of the site;
ii. To inform a decision as to whether further archaeological works will be required in advance of the development groundworks;
iii. To determine or confirm the general nature of any remains present;
iv. To determine or confirm the approximate date or date range of any remains, by means of artefactual or other evidence;
v. To compile a professional archival record of any archaeological remains within the evaluation works.

2.2 Methodology

2.2.1 The project methodology, set out in the WSI (*Appendix A*), was adhered to in full, and was fully compliant with current guidelines and industry best practice (CIfA 2019; 2020a; 2020b; HE 2015).

2.2.2 The position of the trenches to be excavated was set out by use of dGPS (accurate to 0.02-0.03m) and service checks were undertaken by OA North. Only one of the 76 proposed trenches could not be excavated, Trench 73, owing to the proximity of overhead power lines and it was not possible to move it south due to another trench being located immediately to the south, Trench 74. Topsoil and subsoil were removed to natural geology or the first significant archaeological horizon by 13-ton mechanical excavators and stored immediately adjacent to the trenches.

2.2.3 All information identified during the site works was recorded stratigraphically, using a system adapted from that used by the former English Heritage Centre for Archaeology with an accompanying pictorial record (plans, sections and digital photographs). Primary records were available for inspection at all times.

2.2.4 Results of all field investigations were recorded on *pro forma* context sheets. The site archive includes a photographic record, and accurate large-scale plans and sections at appropriate scales (1:50; 1:20 and 1:10).

2.2.5 A full professional archive was compiled in accordance with the WSI, and with current professional guidelines (CIfA 2020b; HE 2015). The archive will be deposited with the West Yorkshire Archaeology Advisory Service with a hard copy of the final report being submitted to the West Yorkshire Historic Environment Record.

3 RESULTS

3.1 Introduction and presentation of results

3.1.1 The results of the evaluation are presented below, and include a stratigraphic description of the trenches that contained archaeological remains. The full details of all trenches with dimensions and depths of all deposits can be found in *Appendix B*.

3.2 General soils and ground conditions

3.2.1 The soil sequence in the trenches was fairly uniform. The natural geology of mid to light orange yellow silty clay was overlain by a mid to light grey brown subsoil, approximately 0.2m thick, which in turn, was overlain by topsoil, approximately 0.3m thick. Several trenches contained a layer of colluvium overlying the natural clay, this was identified as a mid yellow brown silty clay.

3.2.2 Ground conditions throughout the evaluation were generally good, and the site remained dry throughout. Archaeological features, where present, were easy to identify against the underlying natural geology.

3.3 General distribution of archaeological deposits

3.3.1 Archaeological features were present in 22 of the 76 trenches, Trenches 1, 5, 7, 10, 12, 20, 21, 23, 24, 26, 31, 46, 49, 51, 52, 56, 66, 67, 70, 71, 74 and 75. The remaining trenches were blank or contained natural features, and will not be discussed further.

3.4 Trenches in Field 1

3.4.1 ***Trench 1***: located in the western part of Field 1, was aligned approximately east/west and targeted on three north/south aligned linear anomalies at the western end of the trench (Fig 3), however, there was no evidence of these, suggesting that they were evidence of modern ploughing. Natural geology ***102*** was identified throughout the trench and was cut by sub-circular pit ***103***, which measured 0.55m long by 0.45m wide and survived to a depth of 0.15m (Fig 4 and Plate 1). Pit ***103*** was filled by a single mid grey brown silty clay deposit, ***104***; there were no finds recovered from this fill, which was overlain by subsoil ***101***, which was, in turn, overlain by topsoil ***100***.

*Plate 1: East-facing section of sub-circular pit **103**, scale 1m*

3.4.2 ***Trench 5***: located in the eastern part of Field 1, was aligned approximated north-east/south-west, was targeted on a linear anomaly and also aimed to test a possible palaeochannel identified by the geophysical survey (Fig 3). There was no evidence for either of these geophysical anomalies within the trench. Natural geology ***502*** was identified throughout the trench and was cut by irregular ditch ***503*** at the south-western end of the trench (Fig 4 and Plate 2). Ditch ***503*** extended across the trench on an approximate north/south alignment, measured 0.54m wide and 0.15m deep, and was filled by a single mid blueish brown silty clay ***504***, there were no finds recovered from this feature. This was overlain by subsoil ***501***, which in turn, was overlain by topsoil ***500***.

*Plate 2: South-west-facing section of ditch **503**, scale 1m*

3.5 Trenches in Field 2

3.5.1 ***Trench 7***: located in the south-western part of Field 2, was aligned approximately north/south and targeted on a linear geophysical anomaly (Fig 3); there was no evidence for this anomaly within the trench. Natural geology ***702*** was identified throughout the trench and was cut by circular pit ***703*** at the southern end of the trench (Fig 5 and Plate 3). Pit ***703*** was filled by three deposits, an initial layer of scorched natural clay ***706***, reddish brown in colour and 0.05m thick, overlain by a light greyish brown silty clay ***705***, 0.04m thick, and finally, sealed by a dark blueish black deposit ***706***, 0.04m thick, there were no finds recovered from this feature. The upper fill of pit ***703*** was truncated by a ceramic field drain. This was sealed by subsoil ***701***, which in turn, was overlain by topsoil ***700***.

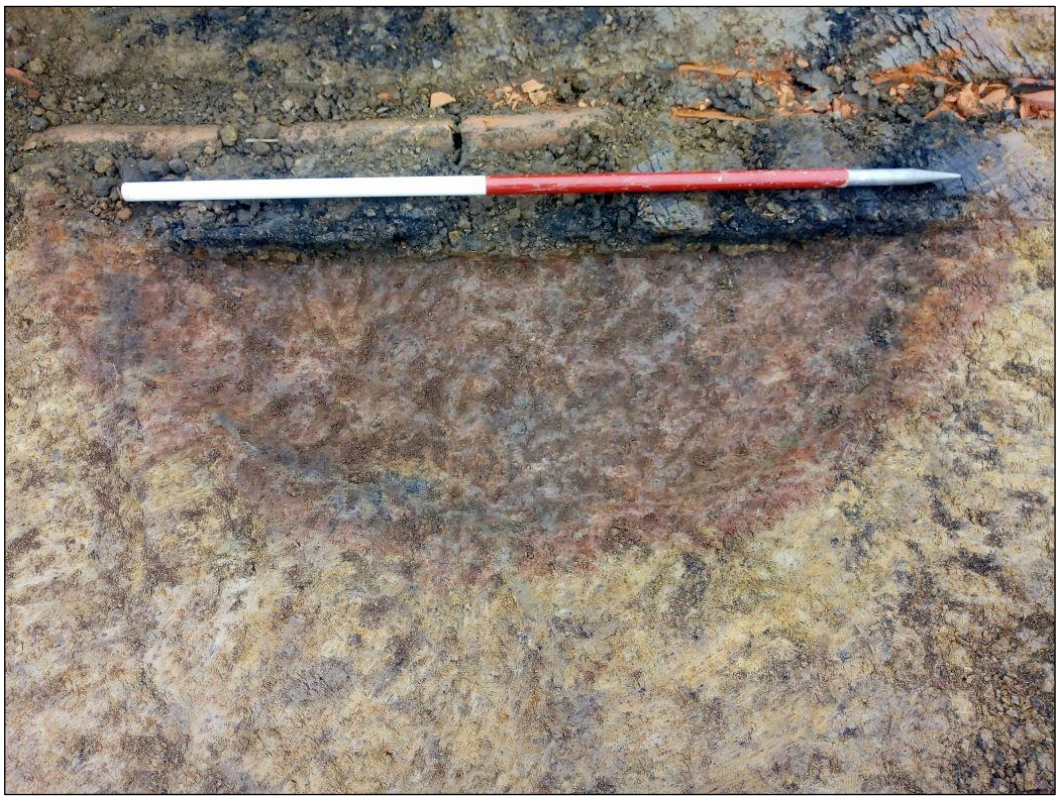


*Plate 3: South-east-facing section of pit **703**, scale 1m*

3.5.2 ***Trench 10***: located on the western side of Field 2, was aligned approximately east/west and targeted on two linear anomalies and a possible palaeochannel at the western end of the trench (Fig 3). Natural geology ***1002*** was identified through the trench and was cut by ditch ***1003*** towards the western end of the trench (Fig 5 and Plate 4); corresponding with the western north-east/south-west anomaly, as seen on the geophysical survey. Ditch ***1003*** extended across the trench on an approximate north/south alignment, measured 1.12m wide and 0.25m deep, and was filled by a single light grey brown silty clay deposit ***1004***, there were no finds recovered from this feature. This was overlain by subsoil ***1001***, which in turn, was overlain by topsoil ***1000***.

*Plate 4: South-west-facing section of ditch **1003**, scale 1m*

3.5.3 ***Trench 12***: located towards the southern edge of Field 2, was aligned approximately east/west and was targeted on several linear anomalies (Fig 3), two of which were identified at the western end of the trench as ***1203*** and ***1205***, however, there was no evidence for the remaining anomalies. Natural geology ***1202*** was identified throughout the trench and was cut by two ditches, ***1203*** and ***1205*** (Fig 5); both ditches appeared to correspond well with the north/south linear geophysical anomalies and were likely related to ridge and furrow ploughing.

3.5.4 Ditch ***1203*** (Fig 5 and Plate 5), the westernmost ditch within the trench, extended across the width of the trench on an approximate north/south alignment, measured 0.65m wide and 0.04m deep, and was filled by a single mid to light brown silty clay deposit ***1204***, there were no finds recovered from this feature. Ditch ***1205*** (Fig 5 and Plate 6), located approximately 5m to the east of ditch ***1203***, extended across the width of the trench on the same north/south alignment as ditch ***1203***, measured 0.45m wide and 0.09m deep, and was filled by a single mid to light brown silty clay ***1206***, there were no finds recovered from this feature. These features were overlain by subsoil ***1201***, which in turn, was overlain by topsoil ***1200***.

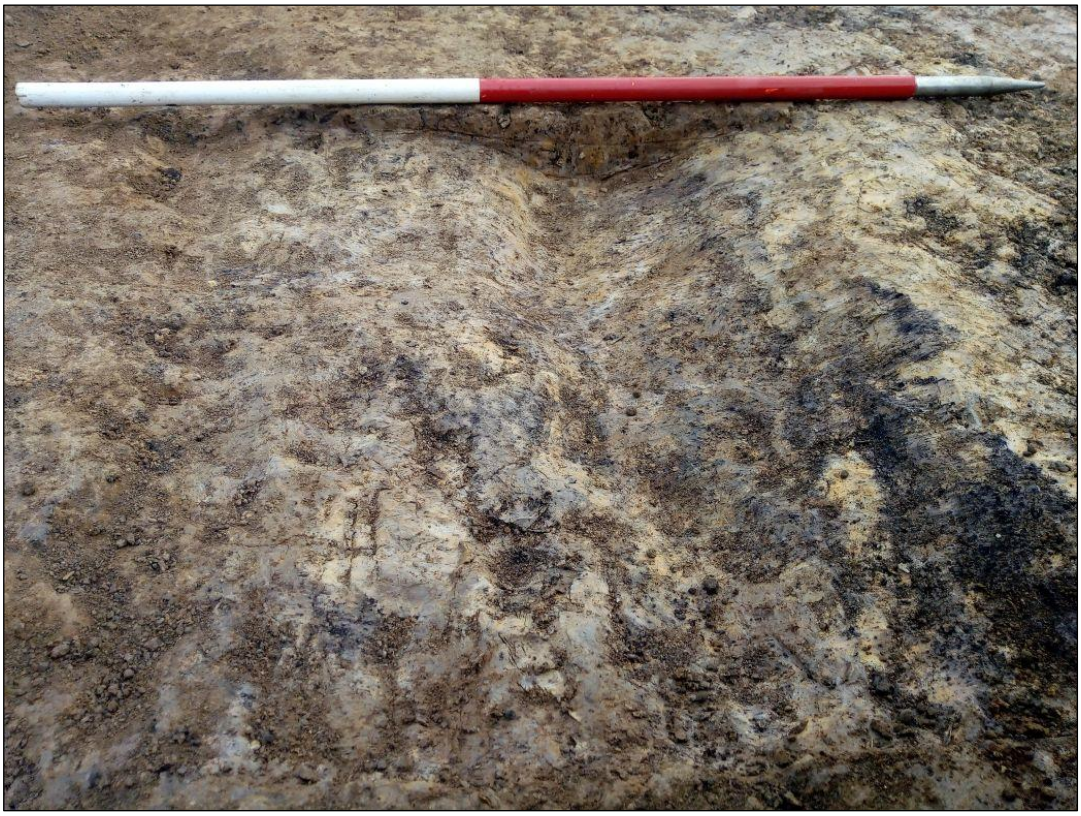


*Plate 5: South-west-facing section of ditch **1203**, scale 1m*

*Plate 6: South-west-facing section of ditch **1205**, scale 1m*

3.5.5 ***Trench 21***: located in the south-east corner of Field 2, was aligned approximately north-east/south-west and was targeted on several linear and discrete geophysical

anomalies (Fig 3). There was no evidence for the geophysical anomalies within the trench, however, ditch ***2103***, encountered at the western end of the trench, may correspond to a continuation of an anomaly identified to the south of the trench.

3.5.6 Natural geology ***2102*** was identified throughout the trench and was cut by ditch ***2103*** at the south-western end of the trench (Fig 5 and Plate 7). Ditch ***2103***, extended across the width of the trench on an approximate north/south alignment, measured 0.75m wide and 0.27m deep, and was filled by a single mid greyish brown deposit ***2104***, there were no finds recovered from this feature. This was overlain by subsoil ***2101***, which in turn, was overlain by topsoil ***2100***.

*Plate 7: North-east-facing section of ditch **2103**, scale 1m*

3.6 Trenches in Field 3

3.6.1 ***Trench 23***: located in the north-western part of Field 3, was aligned approximately east/west and was targeted on a curvi-linear geophysical anomaly (Fig 3), which appeared to be identified in the trench as ditch ***2302***. Natural geology ***2304*** was identified throughout the trench and was cut by ditch ***2302*** through the centre of the trench (Fig 6). Ditch ***2302***, extended across the width of the trench on an approximate north/south alignment, measured 1.9m wide and 0.25m deep, and was filled by a single dark greyish brown silty clay deposit ***2303***, there were no finds recovered from this feature. This was overlain by subsoil ***2301***, which in turn, was overlain by topsoil ***2300***.

3.6.2 ***Trench 24***: located immediately to the south of Trench 23 in the north-western part of Field 3, was aligned north-west/south-east and targeted the same curvi-linear anomaly as Trench 23, as well as several other linear anomalies (Fig 3). There was no

evidence for the curvi-linear anomaly, however, two north/south aligned anomalies were identified as ditches ***2402*** and ***2404***. Cutting natural geology ***2406***, at the south-eastern end of the trench (Fig 6).

3.6.3 Ditch ***2402*** (Fig 6 and Plate 8), was located towards the centre of the trench, extended across the trench on an approximate north/south alignment, measured 0.6m wide and 0.28m deep, and was filled by a single mid orange grey sandy silt deposit ***2403***. Ditch ***2404*** (Fig 6 and Plate 9), was located approximately 6m to the south-east of ditch ***2402***, extended across the width of the trench on the same north/south alignment as ditch ***2402***, measured 0.7m wide and 0.29m deep, and was filled by a single mid orange grey sandy silt deposit ***2405***. There were no finds recovered from either feature. These features were overlain by subsoil ***2401***, which in turn, was overlain by topsoil ***2400***.

*Plate 8: South-west-facing section of ditch **2402**, scale 1m*

*Plate 9: South-west-facing section of ditch **2404**, scale 1m*

3.6.4 ***Trench 31***: located in the western-half of Field 3, was aligned north/south and targeted two linear geophysical anomalies (Fig 3). The east/west aligned linear anomaly was identified as hedgerow ***3103***, however, there was no evidence for the linear anomaly towards the southern end of the trench. Natural geology ***3102*** was identified throughout the trench and was cut by hedgerow ***3103*** at the northern end of the trench (Fig 6). Hedgerow ***3103*** extended across the width of the trench on an approximate east/west alignment, corresponding well with the east/west aligned geophysical anomaly, measured 1.05m wide and 0.32m deep, and was filled by a single mid grey brown silty clay deposit ***3104***. This was overlain by subsoil ***3101***, which in turn, was overlain by topsoil ***3100***.

3.6.5 ***Trench 46***: located along the middle of the southern edge of Field 3, was aligned east/west and targeted several linear anomalies and a curvi-linear anomaly (Fig 3), however, there was no evidence for any of these anomalies within the trench. Natural geology ***4602*** was encountered throughout the trench and was overlain by spread ***4601*** (Fig 6 and Plate 10), approximately 0.2m thick, consisting of light grey orange silty clay, located approximately 12m from the western end of the trench and extending eastwards for a further 6m. Spread ***4601*** was interpreted as an occupation deposit due to its light grey colour and the presence of some burnt material; an environmental sample was taken, which following processing provided evidence for hammerscale (*Appendix C.1.9*). Spread ***4601*** was subsequently overlain by topsoil ***4600***.

*Plate 10: South-facing section of Trench 46, with occupation layer **4601** in the foreground, scale 1m*

3.6.6 ***Trench 49***: was located to the north and east of Trench 46 within the eastern half of Field 3, aligned approximately north-west/south-east and targeted several linear anomalies (Fig 3). Natural geology ***4907*** was identified throughout the trench and was cut by two ditches through the centre of the trench, ***4903*** and ***4905***, both of which appeared to correspond well with the two linear anomalies identified on the geophysical survey (Fig 3).

3.6.7 Ditch ***4903*** extended across the width of the trench on an approximate east/west alignment (Fig 7), measured 0.4m wide and 0.1m deep, and was filled by a single dark grey orange silty clay deposit ***4904***. Ditch ***4905*** was located approximately 1m to the south of ditch ***4903*** on a slightly different north-east/south-west alignment (Fig 7), measured 0.5m wide and 0.2m deep, and was filled by a single dark grey brown silty clay deposit ***4906***.

3.6.8 Approximately 15m to the north of ditch ***4903*** was a shallow depression containing a thin layer of colluvium, ***4902***, comprising mid to dark orange grey silty clay (Fig 7). This deposit appears to correspond well with the geophysical anomaly identified towards the north-western end of the trench (Fig 3). Overlying these deposits and features was subsoil ***4901***, which in turn, was overlain by topsoil ***4900***.

3.6.9 ***Trench 51***: located immediately to the east of Trench 49 in the eastern half of Field 3, was a square trench 10m by 10m and targeted on the same east/west anomalies as Trench 49, as well, as a north/south-aligned anomaly (Fig 3). Natural geology ***5102*** was identified throughout the trench and was cut by an east/west aligned-ditch ***5103*** (Fig 8).

*Plate 11: Trench 51 looking north-west, ditch **5103** in the foreground, 1m and 2m scales*

3.6.10 Ditch ***5103*** extended across the southern part of Trench 51, measured 2.8m wide and 0.28 deep, and was filled by a single light grey brown silty clay ***5104***. This feature was overlain by subsoil ***5101***, which appeared to be cut by a north/south aligned furrow, which corresponded well with the north/south aligned geophysical anomaly (Fig 3 and Plate 11), which was in turn, overlain by topsoil ***5101***.

3.6.11 ***Trench 52***: was located immediately to the south of Trenches 49, 51 and 56 along the southern edge of Field 3, aligned approximately east/west and targeted multiple linear and curvi-linear anomalies (Fig 3). Natural geology **5201** was identified throughout the trench and was cut by ring gully ***5202*** (Fig 7 and Plate 12), approximately 3m long, 1m wide and 0.16m deep, filled by a single mid orange brown sandy silt ***5203***. This curvi-linear feature appears to correspond well with the geophysical anomalies, however, the remaining anomalies do not appear to have been identified within the trench. This feature was overlain by topsoil ***5200***.

*Plate 12: East-facing section of ring gully **5202**, scale 1m*

3.6.12 ***Trench 56***: was located immediately to the east of Trench 51 in the eastern half of Field 3, aligned approximately north/south and targeted on several linear and curvi-linear geophysical anomalies (Fig 3). Natural geology ***5602*** was identified throughout the trench and was cut by plough furrow ***5603*** and ditch ***5605*** (Fig 7), both features corresponding well with the geophysical anomalies.

3.6.13 Plough furrow ***5603*** extended across the trench on an approximate east/west alignment, measured 1.7m wide and 0.1m deep, and was filled by a single light brown sandy silt deposit ***5604***. Ditch ***5605*** was located approximately 5m north of plough furrow ***5603*** on the same east/west alignment, measured 1.7m wide and 0.2m deep, and was filled by a single light grey clayey silt deposit ***5606***. These features were overlain by subsoil ***5601***, which in turn, was overlain by topsoil ***5600***.

3.7 Trenches in Field 5

3.7.1 ***Trench 66***: was located in the central part of Field 5, aligned approximately north-east/south-west and targeted on several linear anomalies, the majority of which appear to be furrows (Fig 3). Natural geology ***6602*** was identified throughout the trench and was cut by two postholes at the southern end of the trench, ***6603*** and ***6605***, a furrow, ***6607***, and a stone-lined drain, ***6609*** (Fig 9).

3.7.2 Posthole ***6603*** (Plate 13) was located approximately 10m from the south-western end of Trench 66, measured 0.37m in diameter and 0.29m deep, and was filled by a single light brown clay silt deposit ***6604***. Posthole ***6605*** (Plate 14) was then located approximately 4m to the north-east of posthole ***6603***, measured 0.25m in diameter and 0.2m deep, and was filled by a single light brown clay silt deposit ***6606***. There was

no evidence of a post-pipe or post-packing in either posthole. These features were overlain by subsoil ***6601***.

*Plate 13: South-facing section of posthole **6603**, scale 0.1m*

*Plate 14: South-facing section of posthole **6605**, scale 0.1m*

3.7.3 Approximately 10m further to the north-east of posthole ***6605*** and cutting subsoil ***6601***, was north-west/south-east aligned furrow ***6607*** (Plate 15), which measured 0.86m wide and 0.14m deep, and was filled by a single light brown orange sandy silt deposit ***6608***. A further 5m to the north of furrow, and again cutting subsoil ***6601***, was north-west/south-east aligned stone-lined drain ***6609*** (Plate 16), which measured 0.35m wide and 0.38m deep. The stone lining of drain ***6609*** was constructed from light grey limestone ***6611***, approximately 0.25m thick, which was overlain by a light orange silty clay fill ***6610***, approximately 0.19m thick. Both features appear to be relatively modern as they appear to cut subsoil ***6601***, they are subsequently overlain by topsoil ***6600***.

*Plate 15: South-east-facing section of furrow **6607**, scale 1m*

*Plate 16: Stone-lined drain **6609** looking north-west, scale 0.1m*

3.7.4 ***Trench 67***: was located in the north-eastern part of Field 5, aligned north-east/south-west and targeted multiple linear anomalies, the majority of which appeared to be furrows (Fig 3). Natural geology ***6701*** was identified throughout the trench and was cut by ditch ***6702***, which correlated well with an east/west-aligned linear anomaly (Fig 3).

3.7.5 Ditch ***6702*** (Figs 9, 12 and Plate 17) was located at the south-western end of Trench 67, measured 1.32m and 0.44m deep. The earliest deposit within ditch ***6702*** was light grey silty clay ***6705***, which appeared to be the result of erosion of the southern edge of the ditch. This was overlain by light orange grey silty clay ***6704***, which likely formed

as a result of a gradual accumulation over time, which in turn, was overlain by light orange grey clayey silt ***6703***, the final filling of the ditch. This was subsequently sealed by topsoil ***6700***.

*Plate 17: East-facing section of ditch **6702**, scale 1m*

3.7.6 ***Trench 70***: was located on the eastern edge of Field 5 and to the south of Trench 67, and comprised a square trench 10m by 10m targeted on the same north-east/south-west-aligned anomaly as Trench 71, as well, as a north-west/south-east-aligned anomaly (Fig 3). Natural geology ***7002*** was identified throughout the trench and was cut by two ditches, a north-east/south-west-aligned ditch excavated in two slots as ***7003*** and ***7010***, and a north-west/south-east-aligned ditch excavated in two slots as ***7006*** and ***7015*** (Figs 10 and 13).

3.7.7 Ditch ***7006*** and ***7015*** appeared to be the earlier feature (Fig 13), as ***7006*** appeared to be cut by ***7003***. Ditch ***7015*** (Plate 18) was excavated as a full profile through the feature, which measured 2.08m wide and 1.14m deep and had a V-shaped profile, being filled by three deposits, ***7016***, ***7017*** and ***7018***, with the same sequence identified in ditch ***7006***. The earliest deposit identified within ditch ***7015*** was fill ***7018***, (***7009*** in ditch ***7006***), a light brown grey silty clay, approximately 0.52m thick. Fill ***7018*** was overlain by fill ***7017*** (***7008*** in ditch ***7006***), a mid orange brown sandy silt, approximately 0.32m thick. Fill ***7017*** was subsequently overlain by fill ***7016*** (***7007*** in ditch ***7006***), a light brown grey silty clay, approximately 0.32m thick.

*Plate 18: West-facing section of ditch **7015**, scale 2m*

3.7.8 Ditch ***7010*** (Plate 19) contained four deposits, whilst only two of these were visible in ditch ***7003***, perhaps due to the positioning of the relationship slot within the ditch. The earliest deposit within ditch ***7010*** was ***7014***, a light brown grey silty clay, 0.78m thick, and appeared to be a slumping deposit formed down the western side of the ditch. Fill ***7014*** was overlain by ***7013***, a light grey silty clay, 0.4m thick. Fill ***7013*** was subsequently overlain by fill ***7012*** (***7005*** in ditch ***7003***), a light grey orange sandy silt, 0.24m thick. The final fill of ditch ***7010*** was fill ***7011*** (***7004*** in ditch ***7003***), a mid brown grey sandy silt, 0.5m thick.

*Plate 19: North-east-facing section of ditch **7010**, scale 2m*

3.7.9 These features were overlain by subsoil ***7001***, which was in turn, overlain by topsoil ***7000***.

3.7.10 ***Trench 71***: was located on the eastern edge of Field 5 and to the south of Trench 70, aligned approximately north-west/south-east and targeted multiple linear anomalies (Fig 3). Natural geology ***7102*** was located throughout the trench and was cut by north-east/south-west aligned ditch ***7103***, located at the north-western end of the trench, and appearing to be the same ditch identified as ***7003*** and ***7010*** in Trench 70 (Fig 10), corresponded well with the geophysical anomaly, however, the anomalies to the south of this were not identified within the trench.

3.7.11 Ditch ***7103*** extended through the width of Trench 71 (Fig 14 and Plate 20), measured 4.6m wide and excavated to a maximum depth of 0.6m, the feature appeared to continue deeper, however, it could not be bottomed due to health and safety constraints. The ditch was filled by two deposits, ***7104*** and ***7105***, the earliest being ***7104***, a mid yellow brown clay silt, 0.7m wide on the eastern side of the ditch and 0.2m thick. Fill ***7104*** was overlain by fill ***7105***, a final accumulation of a mid grey brown sandy silt, surviving to up to 0.6m thick. This was overlain by subsoil ***7101***, which in turn, was overlain by topsoil ***7100***.

*Plate 20: Trench 71 looking south-east, with ditch **7103** in the foreground, scales 1m and 2m*

3.7.12 ***Trench 74***: was located to the east of Trench 66 and south of Trench 71 in Field 5, aligned approximately east/west and targeted on several linear geophysical anomalies (Fig 3). Natural geology ***7402*** was identified throughout the trench and was cut by north-west/south-east aligned ditch ***7403***. Ditch ***7403*** (Fig 9 and Plate 21) was identified at the eastern end of Trench 74, measured 1.25m wide and 0.32m deep, and was filled by a single light blueish brown silty clay deposit ***7404***. Ditch ***7403*** appeared to correlate well with the geophysical anomaly at the eastern end of the trench. This was overlain by subsoil ***7401***, which was in turn, sealed by topsoil ***7400***.

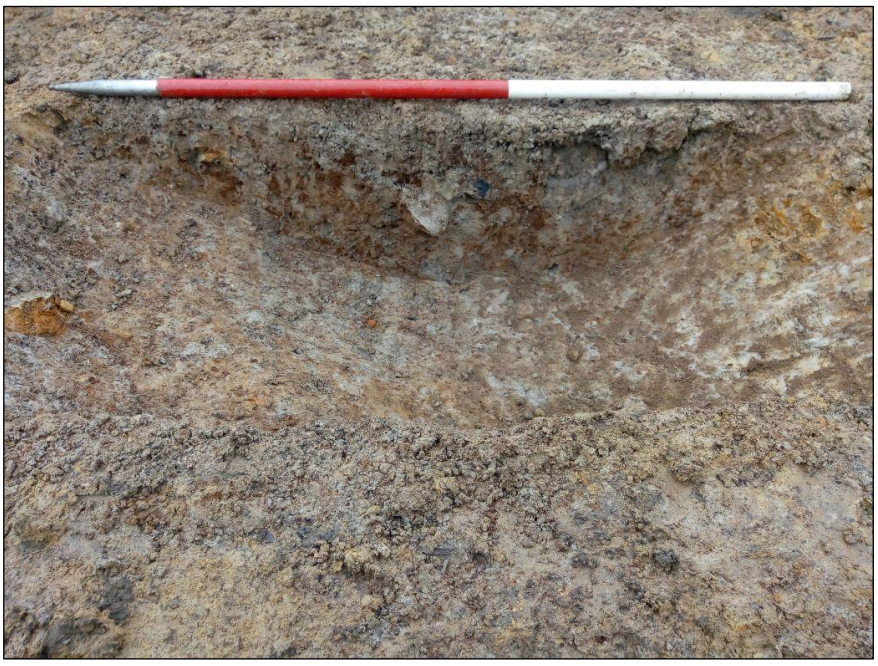


*Plate 21: South-east-facing section of ditch **7403**, scale 1m*

3.7.13 ***Trench 75***: was located in the south-eastern part of Field 5, aligned north-east/south-west and was not targeted on geophysical anomalies, but was aimed to ground truth an area not geophysically surveyed (Fig 3). Natural geology ***7502*** was identified throughout the trench and was cut, initially, by east/west-aligned ditch ***7505***, which itself was cut by ditch ***7503*** (Fig 9 and Plate 22).

*Plate 22: West-facing section of ditches **7503** and **7505**, scale 1m*

3.7.14 Ditch ***7505*** (Fig 12) was located at the south-western end of the trench, measured 0.42m wide and 0.2m deep and filled by a single mid orange grey silty clay deposit ***7506***. Fill ***7506*** was cut along its southern edge by ditch ***7503***, on the same alignment as ditch ***7505***, which measured 1m wide and 0.41m deep. The initial fill of ditch ***7505*** was deposit ***7504***, a light blueish grey clay, likely formed through water erosion. Deposit ***7504*** was subsequently overlain by ***7507***, a mid yellow grey silty clay, likely a gradual accumulation of fill over time. These features were overlain by subsoil ***7501***, which was in turn, overlain by topsoil ***7500***.

3.8 Trenches in Field 6

3.8.1 ***Trench 20***: was located in the western part of Field 6, aligned approximately north-west/south-east and was not targeted on geophysical anomalies, but was aimed to ground truth an area not geophysically surveyed (Fig 3). Natural geology ***2003*** was identified throughout the trench and was cut by two ditches, ***2004*** and ***2006*** (Fig 11).

3.8.2 Ditch ***2004*** (Plate 23) located at the north-western end of the trench, was aligned approximately east/west, measured 0.43m wide by 0.09m deep and was filled by a single light blue grey silty clay deposit ***2005***. Ditch ***2006*** (Plate 24) located at the south-eastern end of the trench, was aligned approximately north/south, measured 0.94m wide by 0.2m deep and was filled by a single light yellow brown silty clay deposit ***2007***.

*Plate 23: West-facing section of ditch **2004**, scale 1m*

*Plate 24: South-facing section of ditch **2006**, scale 1m*

3.8.3 ***Trench 26***: was located in the north-eastern part of Field 6 immediately to the east of Trench 20, aligned north-east/south-west and was again not targeted on geophysical anomalies, but was aimed to ground truth an area not geophysically surveyed (Fig 3). Natural geology ***2608*** was identified throughout the trench and was cut by a single ditch ***2604***, located towards the centre of the trench (Fig 11).

3.8.4 Ditch ***2604*** was located towards the centre of Trench 26, aligned approximately north-west/south-east and measured 2.1m wide and 0.66m deep (Fig 12 and Plate 25). The ditch was filled by five deposits, the earliest being an orange yellow pale grey silt clay, ***2607***, 0.24m thick, which lined the base of the ditch and a bias towards the eastern side of the ditch possibly suggested a bank along that side. Fill ***2607*** was overlain by a pale blue grey silt clay, ***2606***, 0.10m thick, the colour of this deposit suggested that it had accumulated in standing water. Fill ***2606*** was then overlain along the south-western edge of the ditch by fill ***2602***, a brown pale grey silt clay, 0.10m thick slump deposit. Fill ***2602*** was, in turn, sealed by fill ***2603***, an orange yellow pale grey silt clay, 0.10m thick, and suggesting that the deposit formed whilst the ditch was waterlogged. The final filling of the ditch was a gradual accumulation of a brown orange flecked pale grey clay silt, ***2605***, 0.19m thick. This feature was sealed by subsoil ***2601***, which was in turn, overlain by topsoil ***2600***.

*Plate 25: South-east-facing section of ditch **2604**, scale 1m*

3.9 Environmental summary

3.9.1 Four environmental samples were retrieved from four separate features, upper fill ***2605*** from ditch ***2604***, an occupation layer/spread, ***4601***, fill ***5203*** from possible ring gully ***5202***, and fill ***5606***, from ditch/furrow ***5605***. Preservation of

palaeoenvironmental remains is primarily through charring. Ditch fill ***2605*** and possible ring gully ***5202*** contained frequent seeds and insect remains, but these are likely to be modern.

3.9.2 All four of the samples contained charcoal, including rare to frequent identifiable fragments of oak (*Quercus* sp), alder/hazel (*Alnus glutinosa/Corylus avellana*), possible blackthorn and hawthorn-type (*Prunus*-type and Maloideae), and birch/willow (*Betula*/*Salix* sp). Charred plant remains other than charcoal were rare, but included a single fat-hen (*Chenopodium album*) seed in possible ring gully ***5202***, and half a possible pea (*Pisum sativum*), a large grass (Poaceae) seed, and rare grass stem fragments in occupation layer/spread ***4601***.

4 DISCUSSION

4.1 Reliability of field investigation

4.1.1 As stated above in *Section 2.2.2*, one of the 76 proposed trenches could not be excavated, Trench 73, due to the proximity of overhead power lines and it was not possible to move it south due to another trench, Trench 74, being located immediately to south. It is believed that there was no compromise to the reliability of the evaluation, with coverage of the site and geophysical anomalies being maintained. All features encountered within the trenches were characterised.

4.2 Evaluation objectives and results

4.2.1 The aims as identified above in *Section 2.1.1* stated that the principal focus of the evaluation was to identify the presence (or absence) of any archaeology within the site and to provide information as to the need for and scope of any subsequent mitigation strategy. To meet these aims, the programme of trenching was designed to provide adequate coverage across the site, to target anomalies identified on the geophysical survey (Magnitude Surveys 2020) and to test any areas not subject to geophysical survey.

4.2.2 Only one of the trenches was not excavated, due to its proximity to overhead power lines and another trench. All the remaining trenches were successfully excavated in their intended locations and the programme of trenching succeeded in characterising the anomalies and 'blank' areas identified during the geophysical survey.

4.3 Interpretation

4.3.1 The features identified within the western half of the site appeared to be related to post-medieval and modern ploughing and, therefore, of little interest. However, the features identified in the eastern halves of Field 3 and Field 5 corresponded well with the geophysical survey results and appeared to have been of a form likely to have dated to the late prehistoric period or Romano-British period.

4.3.2 The features identified in Trenches 46, 49, 51, 52, and 56 were suggestive of an enclosed area containing ring features. The geophysical survey suggests that there may be further ring features other than those identified in Trench 52. There was no dating evidence recovered from these features, however, they were of a form normally associated with the late prehistoric or Romano-British periods.

4.3.3 The ditches identified in Trenches 70 and 71, in the eastern part of Field 5, were substantial in size suggesting they were part of an enclosure system. The geophysical survey results suggest that there may well be a substantial number of discrete or possible ring features enclosed by these ditches and that there was evidence of possible internal divisions through the presence of north-west/south-east aligned ditch ***7010***. The geophysical survey results could not be tested during the evaluation due to the presence of overhead cables between Trenches 71 and 74. Again there was no dating evidence recovered from these features, however, they were of a form normally associated with late prehistoric or Romano-British periods.

4.4 Significance

4.4.1 The results of the evaluation have highlighted that the anomalies identified as 'strong probably archaeology' by the geophysical survey (Magnitude Surveys 2020) were relatively accurate. This is clearly shown on Fig 3, where the archaeological remains identified in Trenches 49, 51, 52, 56, 70, 71 and 74 proved to correspond well with the geophysical anomalies. As such, viewing the geophysical survey results and the evaluation results together, there are clearly two areas of good archaeological potential. The first of these areas being in the vicinity of Trenches 46, 49, 51, 52, and 56, where there was evidence for a possible enclosure ditch and several possible ring gully features, as well as a possible occupation layer. The second area was in the vicinity of Trenches 70, 71 and 74, where the was evidence of substantial enclosure ditches related to several discrete features identified on the geophysical survey, which could not be tested due to the presence of the overhead powerlines.

4.4.2 There is also good potential for the preservation of palaeoenvironmental remains across the site. The presence of charcoal from all four features and/or deposits that were sampled, together with fat hen (a plant of waste/cultivated soils), and cultivated pea and rare hammerscale from occupation layer/spread ***4601***, provides tentative evidence for local domestic and industrial activity. The identification of possible plough marks in the area, however, means that careful consideration needs to be given to ensure only secure, undisturbed, deposits are sampled. Any charred seeds/fruits, or charcoal representing short-lived wood, would provide suitable material for radiocarbon dating if warranted.

4.4.3 Although there was no artefactual dating evidence recovered from the excavated features during the evaluation, the form of the features in the eastern part of the site appeared to suggest a late prehistoric or Romano-British date.

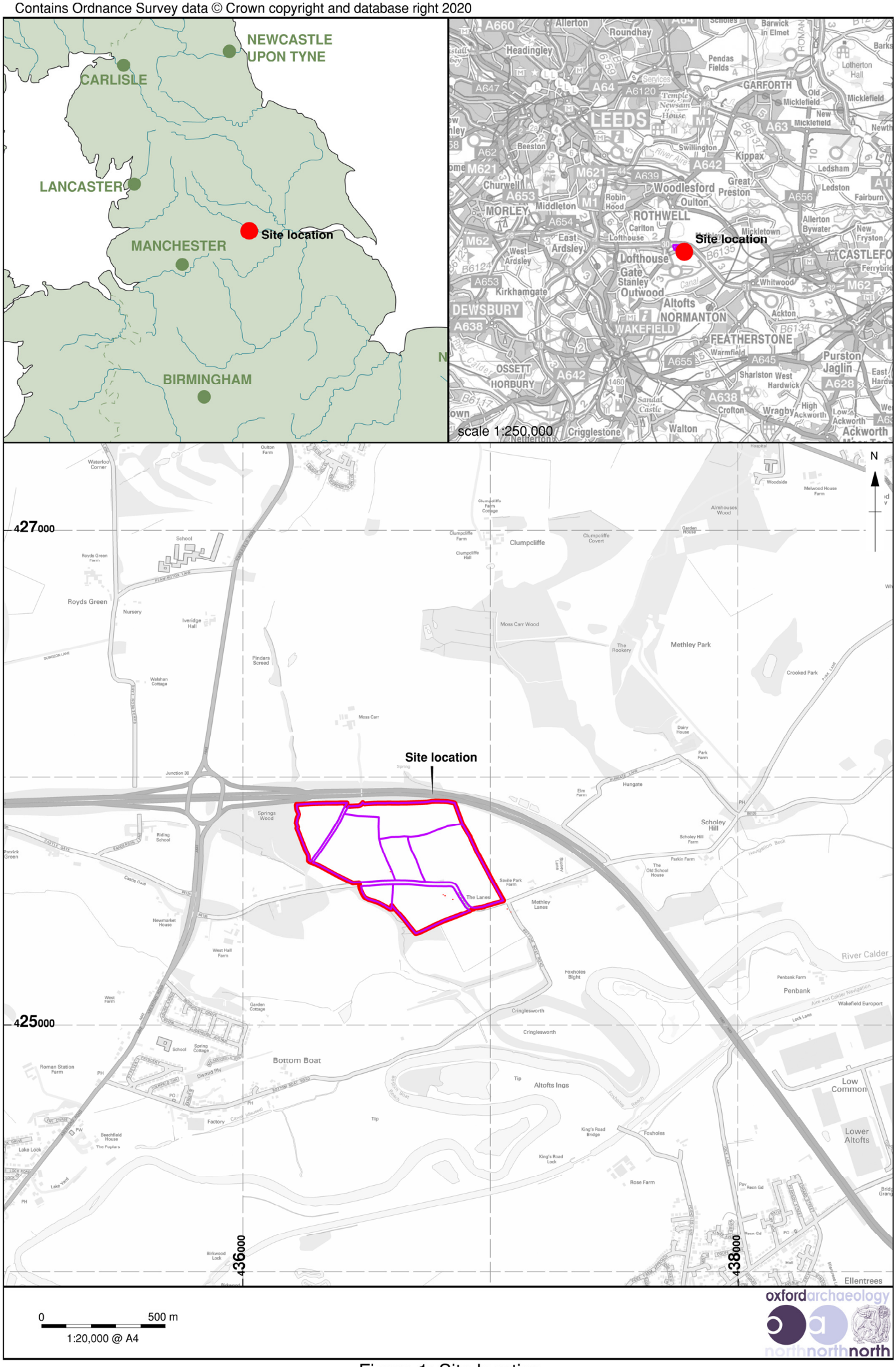


Figure 1: Site location

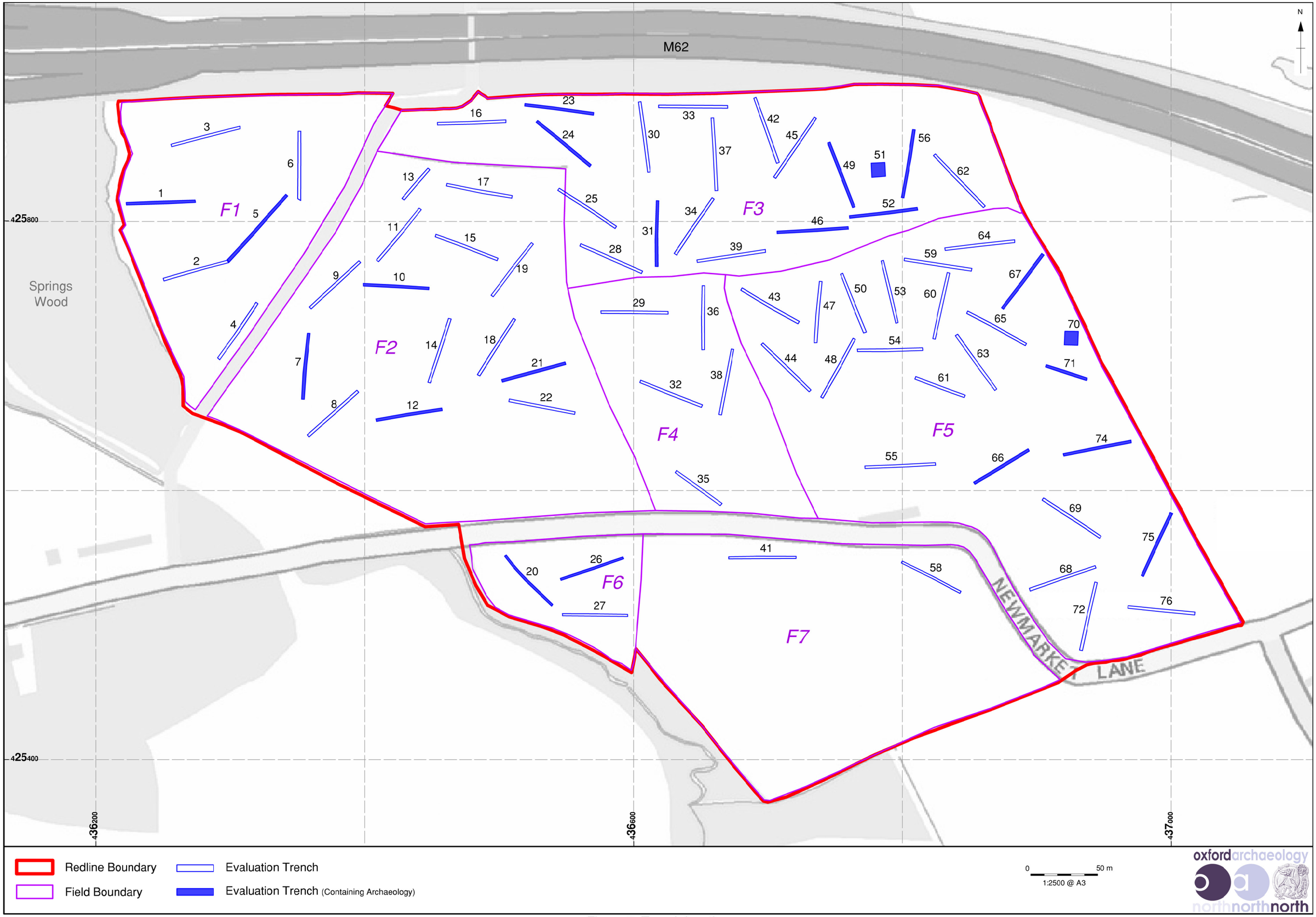


Figure 2: Trench locations

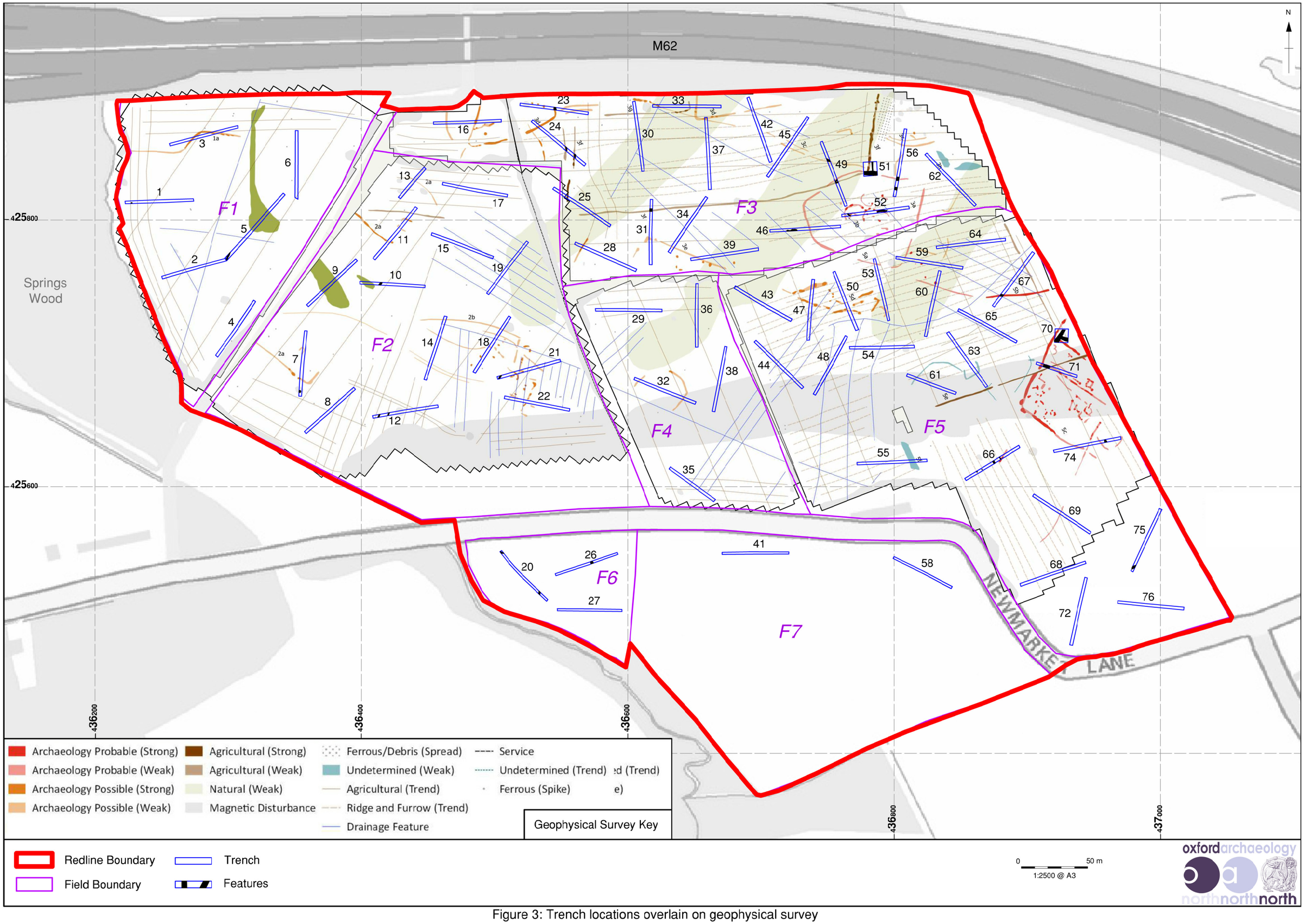


Figure 3: Trench locations overlain on geophysical survey

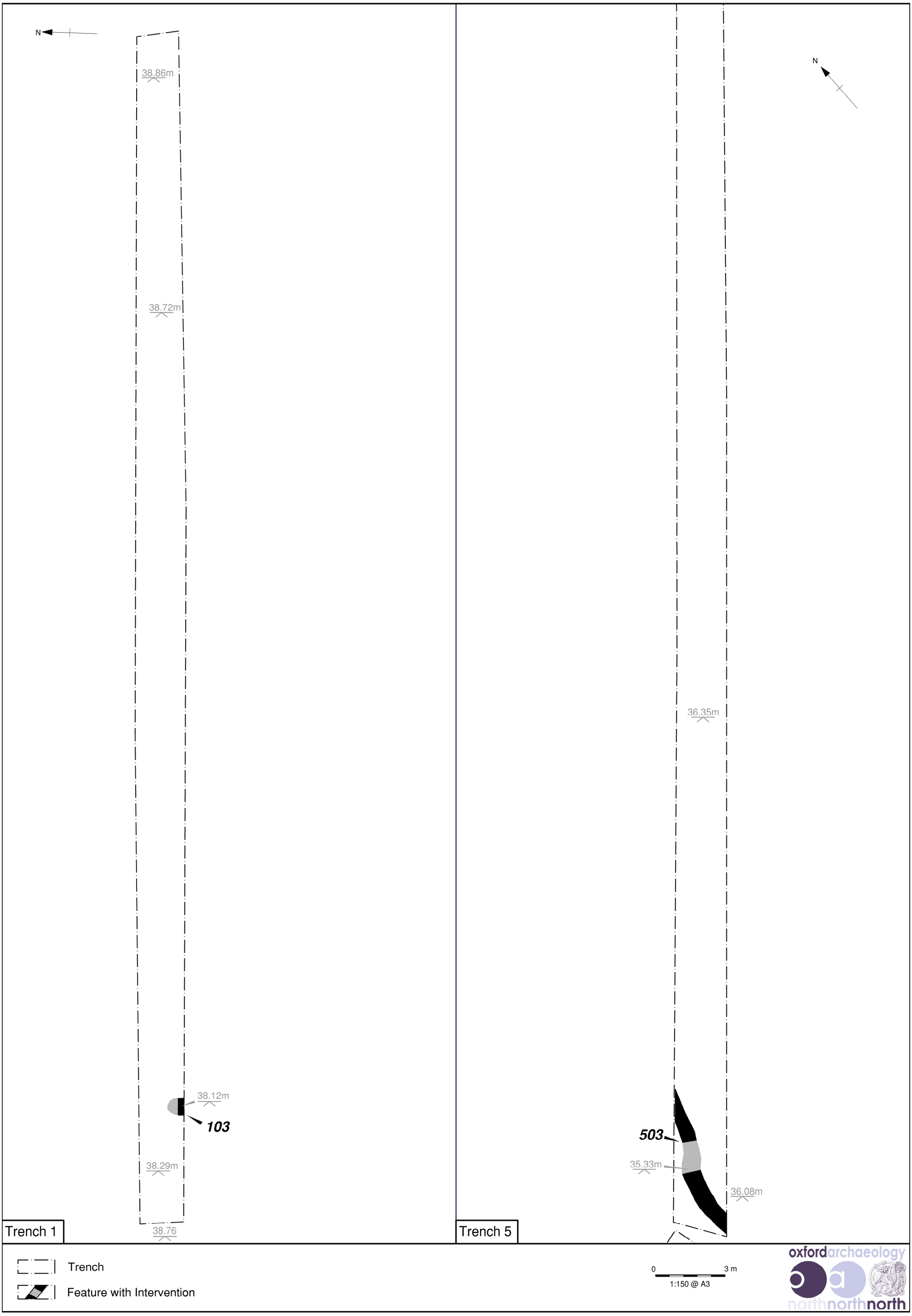


Figure 4: Detail of trenches containing archaeology in Field 1

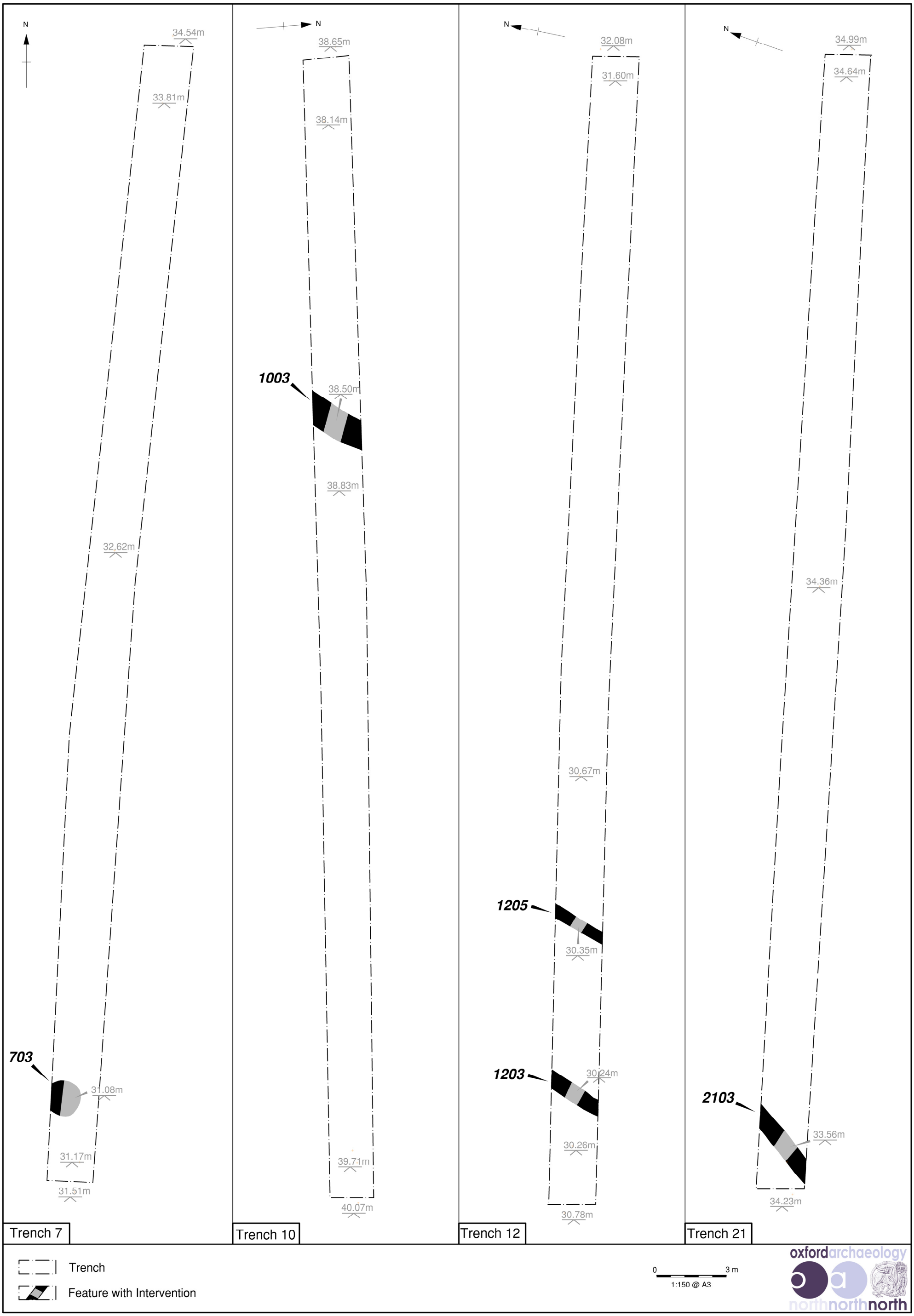


Figure 5: Detail of trenches containing archaeology in Field 2

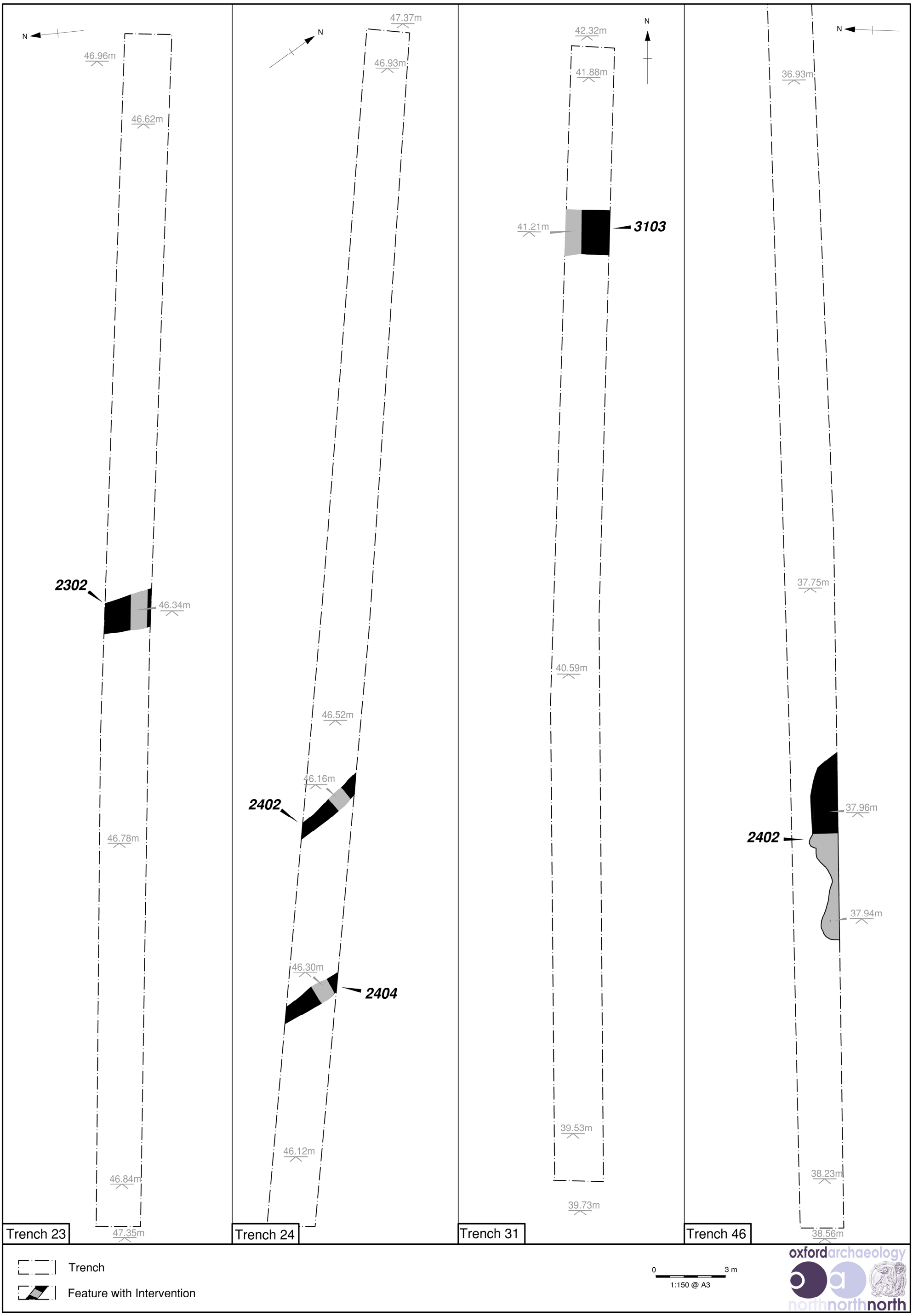


Figure 6: Detail of trenches containing archaeology in the west half of Field 3

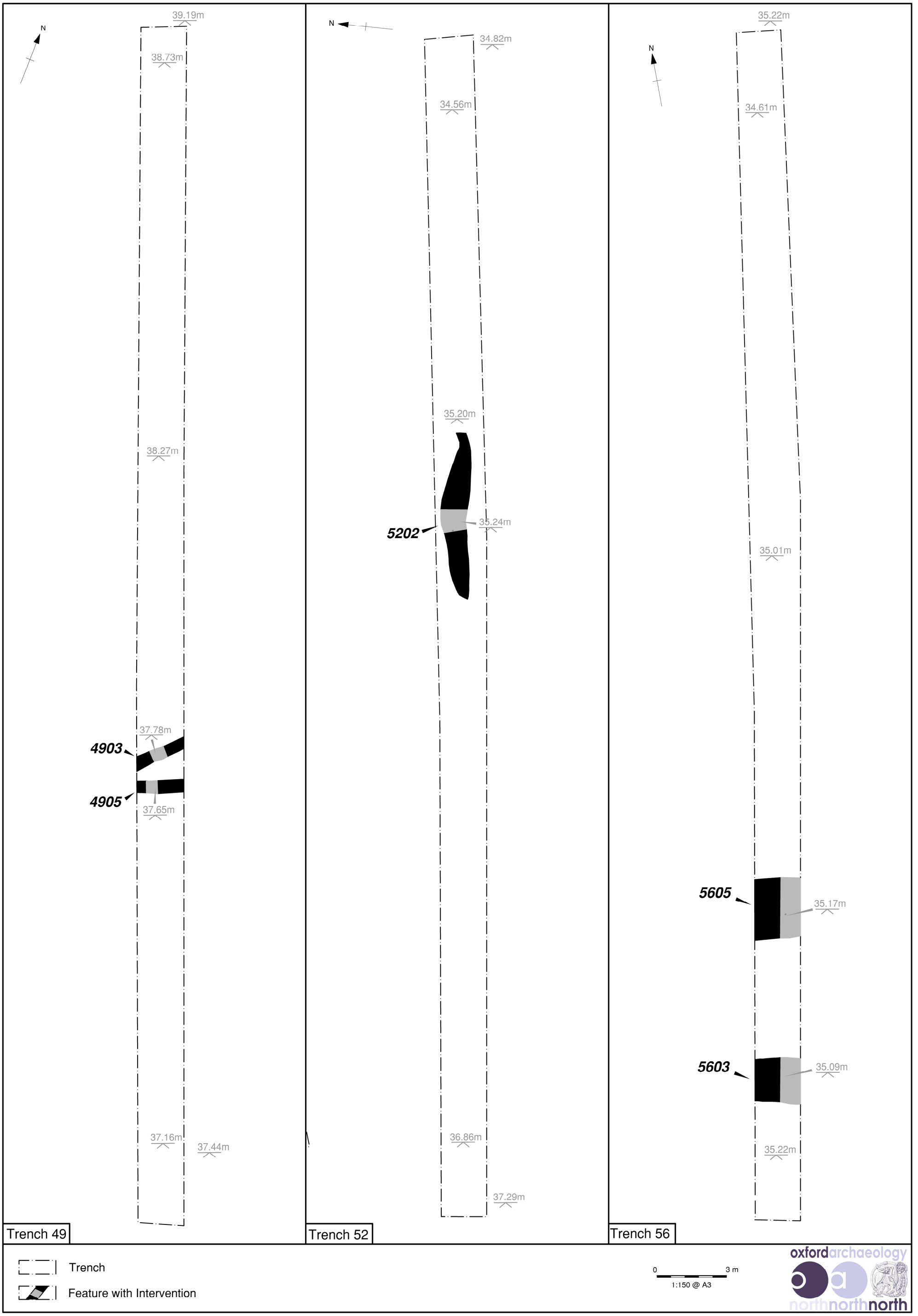


Figure 7: Detail of trenches containing archaeology in the east half of Field 3

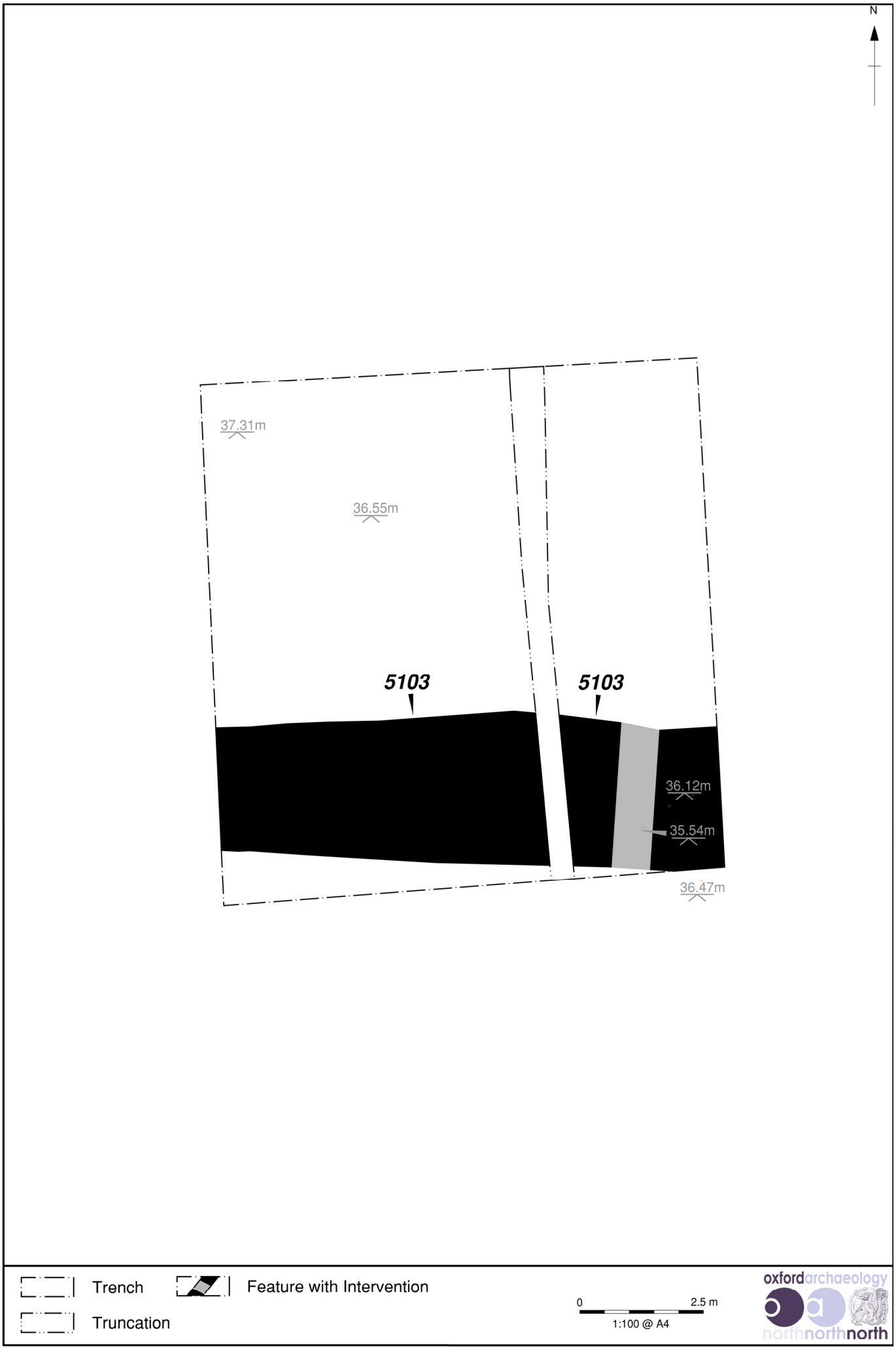


Figure 8: Detail of trench 51, Field 3

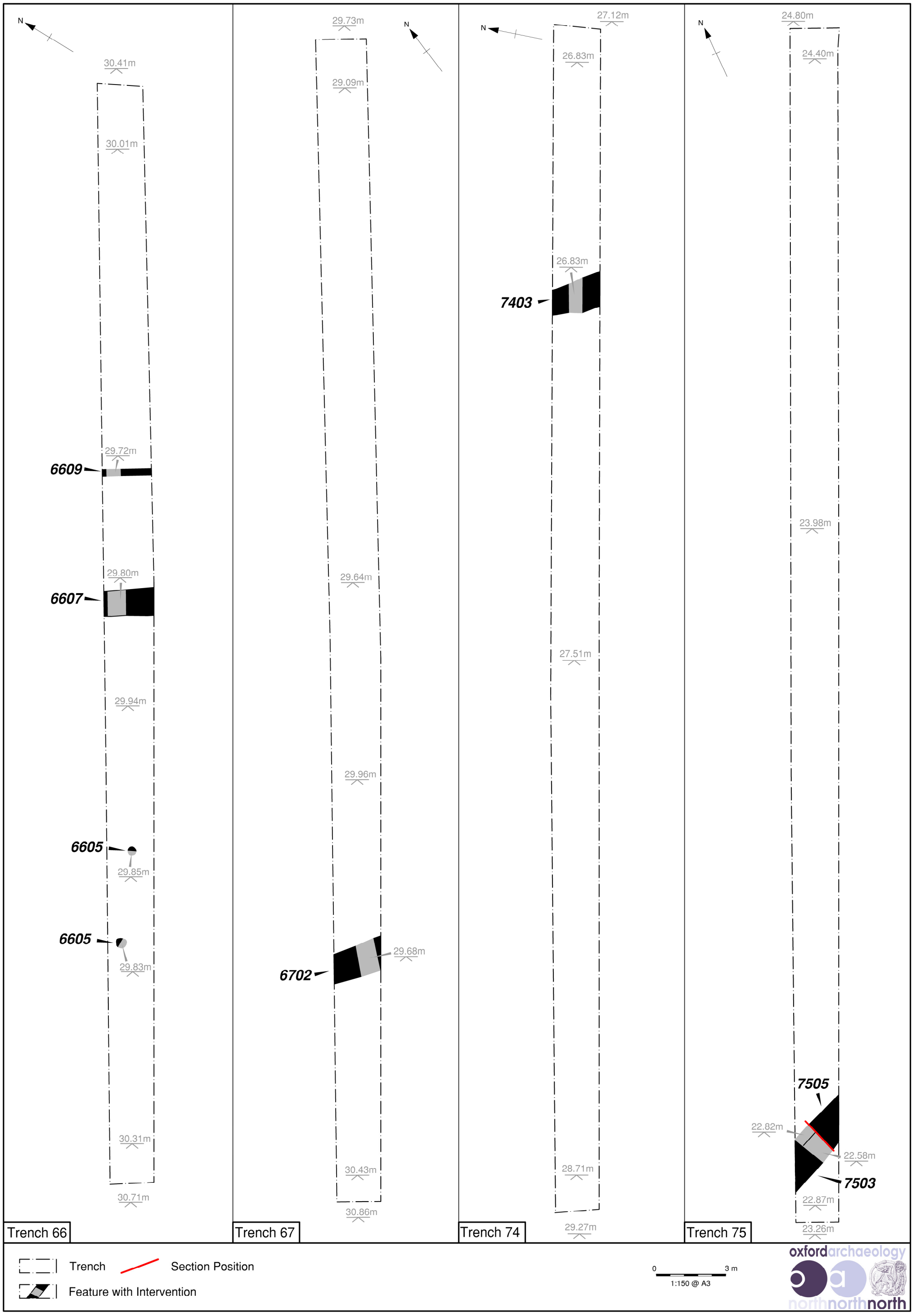


Figure 9: Detail of linear trenches containing archaeology in Field 5

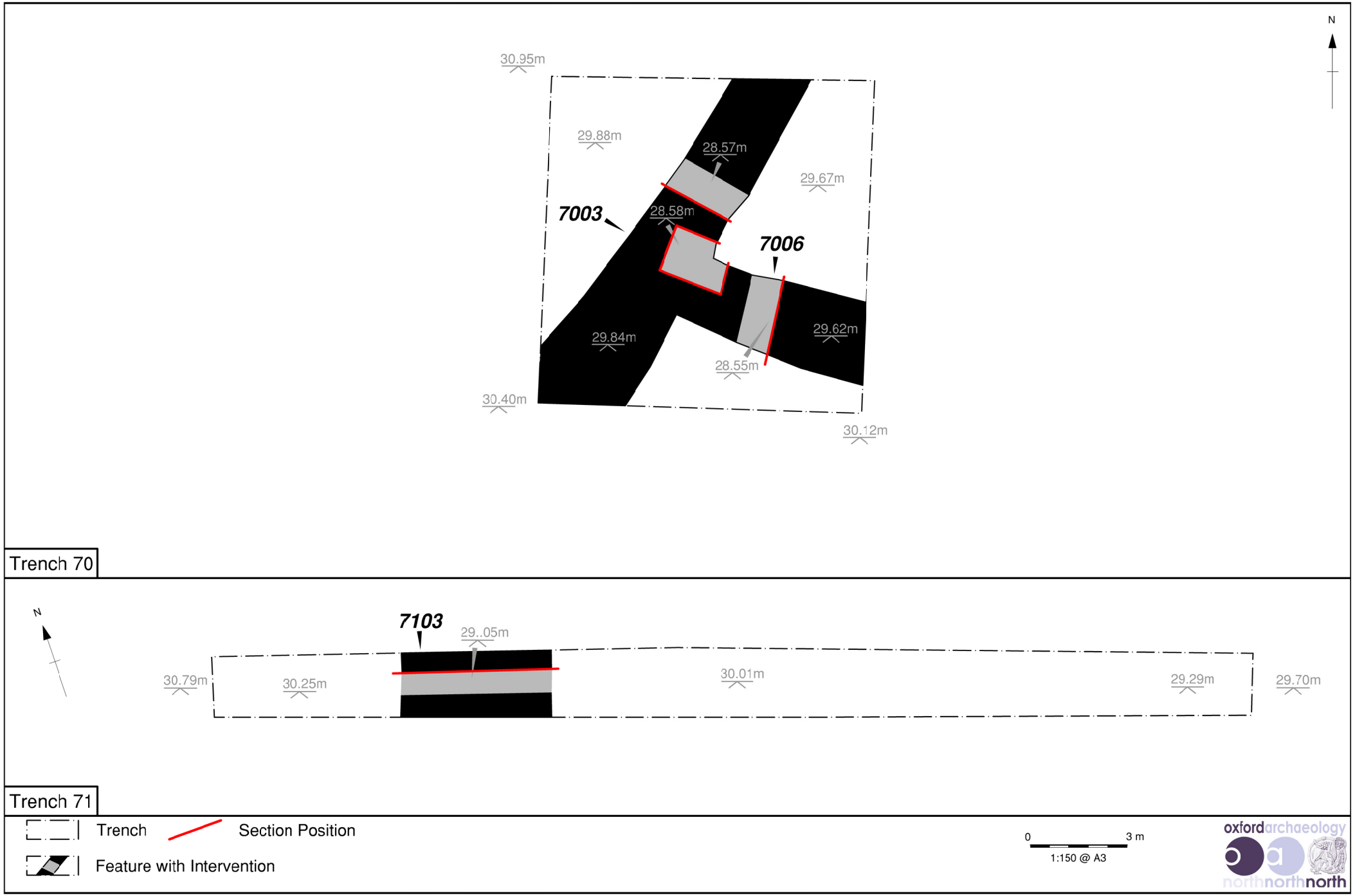


Figure 10: Detail of trenches 70 and 71, Field 5

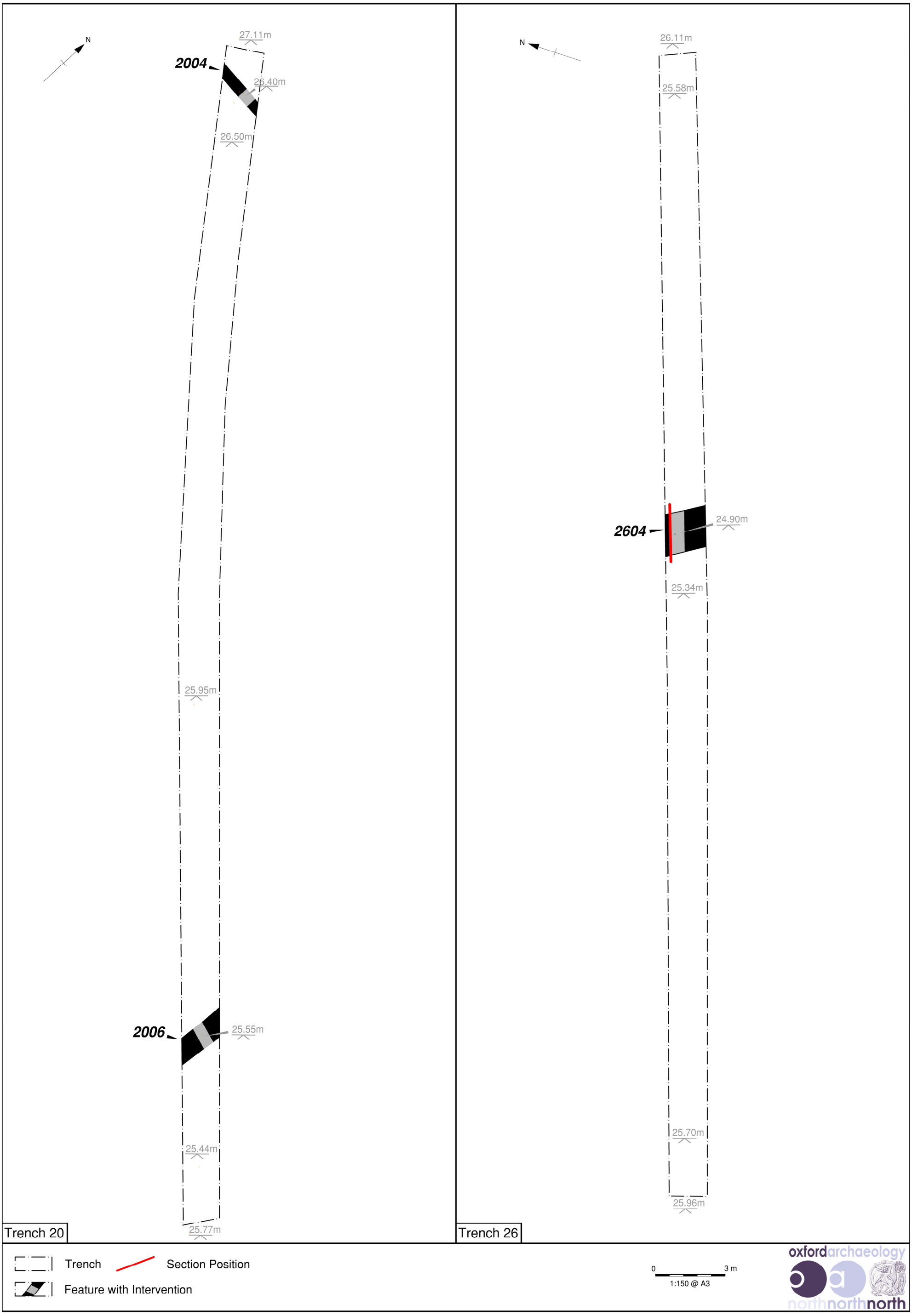
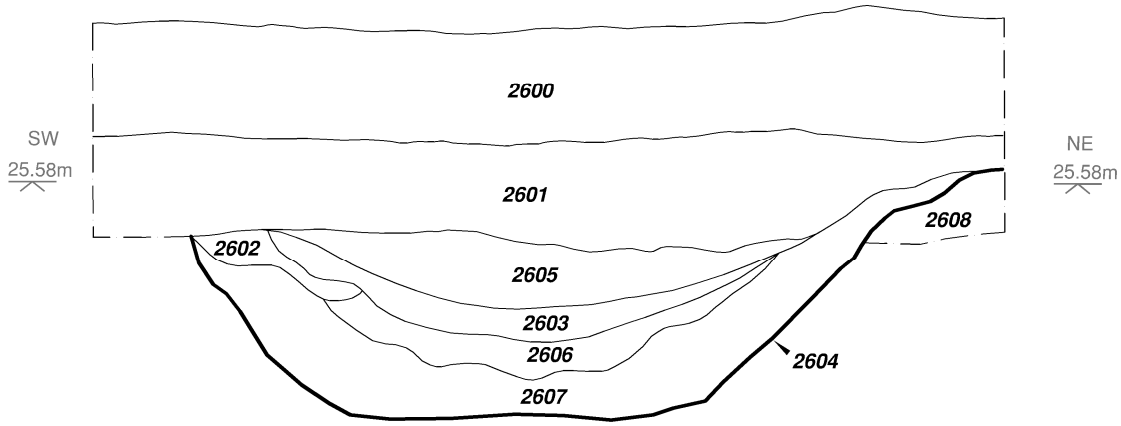
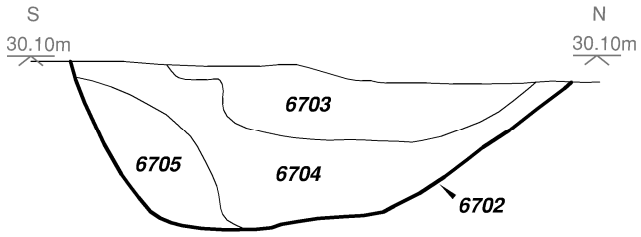


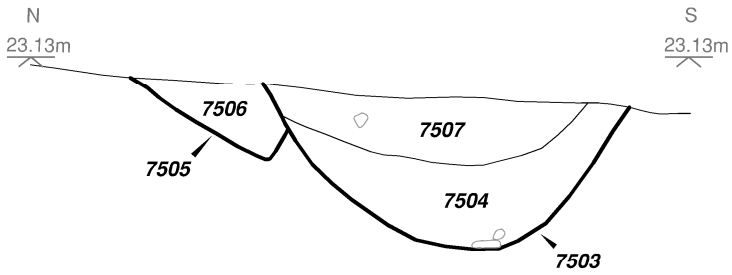
Figure 11: Detail of trenches containing archaeology in Field 6



South-facing section of ***2604*** in Trench 26



East-facing section of ***6702*** in Trench 67



West-facing section of ***7505*** and ***7503*** in Trench 75

Limit of Excavation

Cut

Layer/Deposit

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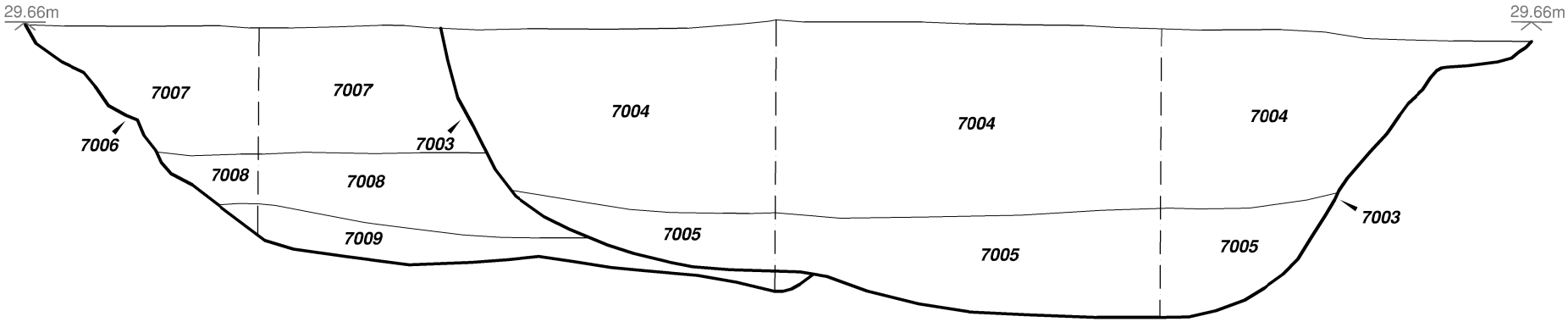
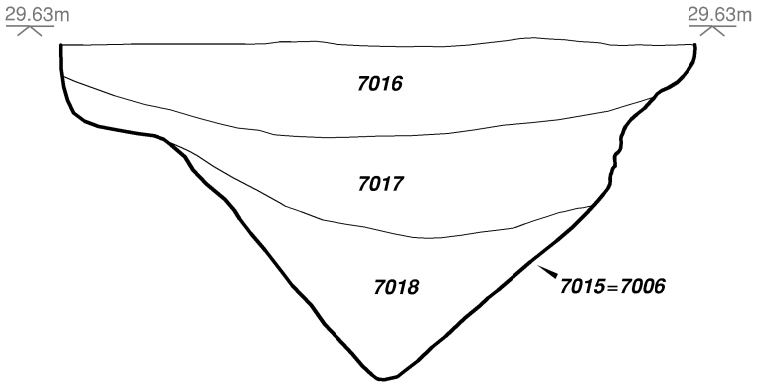
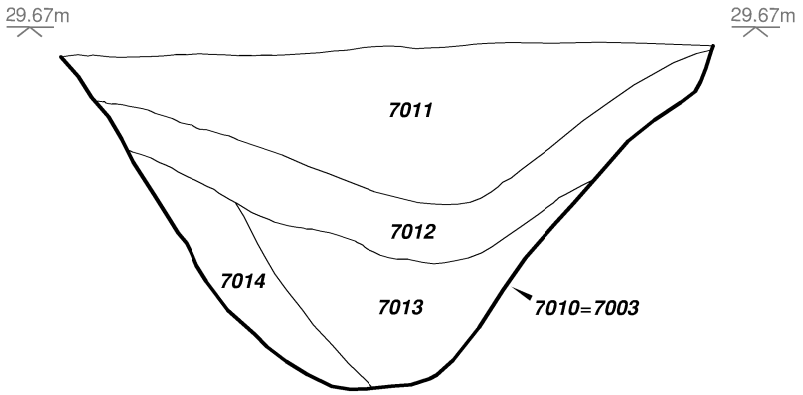
Figure 12: Sections in Trenches 26, 67 and 75



Unfolded box section showing relationship between ***7006*** and ***7003***



North-west-facing section of ***7015=7006***



North-east-facing section of ***7010=7003***

Limit of Excavation

Cut

Layer/Deposit

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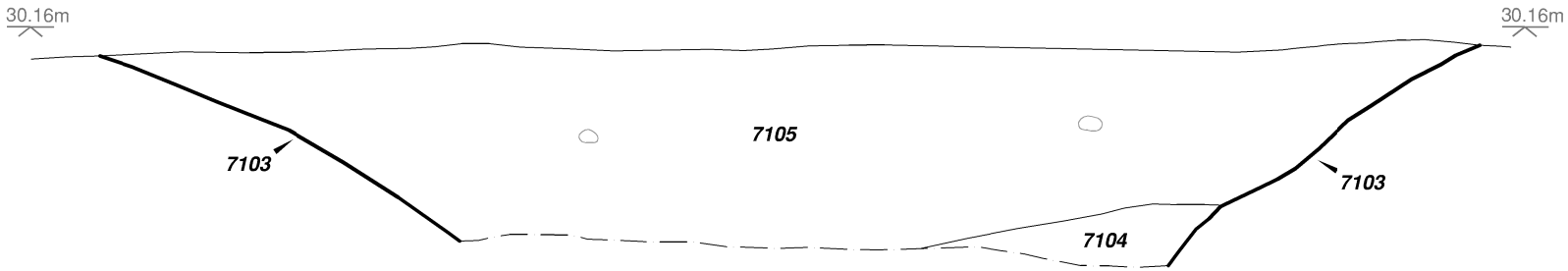
Figure 13: Sections in Trench 70



South-west-facing section of ***7103***

Limit of Excavation

Cut

Layer/Deposit

0 0.5 m

1:25 @ A4

Figure 14: Section in Trench 71

APPENDIX A WRITTEN SCHEME OF INVESTIGATION

THE ENVIRONMENT PARTNERSHIP

LAND NORTH OF NEWMARKET LANE

METHLEY, WAKEFIELD

ARCHAEOLOGICAL WRITTEN SCHEME OF INVESTIGATION

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Document Title	Archaeological Written Scheme of Investigation
Prepared for	Mountpark Logistics
Prepared by	TEP - Market Harborough
Document Ref	8326.005

Author	Sarah Hannon-Bland
Date	September 2020
Checked	Amir Bassir
Approved	Jason Clarke

Amendment History					
Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
1.0	08.09.20	SHB	AB/JC	Draft for client review	Draft

CONTENTS PAGE

FIGURES

Accession Number. TBC

1.0 Introduction

1.1 This Written Scheme of Investigation (WSI) has been commissioned by Mountpark Logistics as part of a planning application for a storage/distribution warehouse (B8 use class) with ancillary offices, new access arrangements from the existing employment estate road, vehicular parking and hardstanding yards, drainage, landscaping and associated infrastructure and engineering works.

1.2 The proposed development site is located c.6km north-east of Wakefield, and north of Newmarket Lane, Methley, with a narrow area south of Newmarket Lane also included in the application for a short extension of the link road. The site is centred upon National Grid Reference SE 366257.

1.3 The development site comprises five large fields of arable agricultural land separated by lengths of hedgerow to the north of Newmarket Lane, and two smaller fields south of Newmarket Lane.

1.4 In August 2020 geoarchaeological assessment was undertaken by Oxford Archaeology North. The report concluded that there was no evidence for deposition of glacial or fluvial-glacial sediments within the site north of Newmarket Lane. The deposit model produced did not identify any horizons within the sediment sequence with the potential to preserve evidence for prehistoric human activity/occupation or the former Lake Humber. A subsequent geophysical survey was undertaken in the site later in August by Magnitude Surveys. A possible palaeochannel in the north-west of site was recorded, as well as a pentagonal enclosure with internal circular enclosures or roundhouses and pits. Possible trackways leading to the enclosure were identified and the area was tentatively dated to the Iron Age to Romano-British period. A number of other archaeological anomalies were identified, including a large rectangular enclosure with internal divisions and pits. This was also tentatively dated as likely from the Iron Age through to the medieval period. The remains of a ridge and furrow cultivation system was recorded across the site, as well as a number of field boundaries, and later field drainage systems. The survey also revealed that the site shows impacts across the whole area by modern agricultural activities and drainage systems, as well as a modern service trench crossing the middle of the site from north to south.

1.5 As a result, West Yorkshire Archaeology Advisory Service (WYAAS) has provided a specification for a pre-determination archaeological evaluation by trial trenching which informs this WSI. WYAAS has advised that an archaeological evaluation by trial trenching is undertaken at the proposed development site, to help establish the presence, extent, character and significance of any archaeological remains present within the site. Any significant additional archaeological work arising from the results of the evaluation will be covered by a further specification from WYAAS and a new WSI.

1.6 This WSI sets out the methodology for archaeological works comprising a targeted programme of trial trench evaluation across the site north of Newmarket Lane, and in areas that may be impacted as part of the proposed link road, south of Newmarket Lane.

1.7 This WSI also provides a programme of reporting and archiving.

1.8 This WSI has been prepared by The Environment Partnership (TEP) Ltd, a Registered Organisation with the Chartered Institute for Archaeologists (CIfA). It has been authored by a full Member of the CIfA. The archaeological works will be undertaken by Oxford Archaeology North.

2.0 Policy, Standards and Guidance

2.1 Section 16 of The National Planning Policy Framework (NPPF 2019), describes the provisions specifically relating to conserving and enhancing the historic environment.

2.2 Paragraph 189 advises local planning authorities to require an applicant to describe the significance of any heritage assets affected by their proposal, including any contribution made by their setting, including *"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".* It states that *"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".*

2.3 Paragraph 190 advises local planning authorities "*to identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise".* The information gathered here should be taken *"into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal".*

2.4 Paragraph 197 states that "*The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset".*

2.5 Paragraph 199 states that *"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".* The request for pre-determination works attached to the planning application, and this corresponding WSI, are in accordance with this policy provision of the NPPF.

Guidance

2.6 The guidance most relevant to this WSI is provided in:

- Chartered Institute for Archaeologists 2020, Standard and Guidance for Archaeological Field Evaluation;
- Chartered Institute for Archaeologists 2014, Standard and Guidance for Archaeological Excavation;
- Chartered Institute for Archaeologists 2014, Standards and Guidance for the collection, documentation, conservation and research of archaeological materials;

- Chartered Institute for Archaeologists 2020, Standards and Guidance for the creation, compilation, transfer and deposition of archaeological archives; and
- Historic England, 2015, Management of Research Projects in the Historic Environment (MoRPHE).

3.0 Background

Site Location and Geology

3.1 The development site is located c.6km north-east of Wakefield, and north of Newmarket Lane, Methley, with a narrow area south of Newmarket Lane also included in the application for a short extension of the link road. The site is centred upon National Grid Reference SE 366257.

3.2 The British Geological Survey (BGS) records the underlying geology of the site to be Pennine Middle Coal Measures. A drift map of the area shows sporadic deposits of till, possibly some alluvium and possible occurrence of undifferentiated river terrace deposits in the general area, but there is an obvious absence of mapped superficial deposits (OAN, 2020). An area of made ground was identified during borehole investigation in 2017 in the south-east of the site, likely related to the 19th to 20th century coal mining activity in the surrounding area.

3.3 The topography of the development site slopes from the highest elevation in the north-west at 45m above Ordnance Datum aOD to 28m aOD in the south/south-east above Ordnance Datum (aOD).

Archaeological and Historic Background

Palaeolithic

3.4 The site falls within a 1km radius of the former glacial Lake Humber, thought to have been in place between 14,650 BC and 9150 BC. It has been suggested that human subsistence activity in the form of hunter-gathering was focussed at the wetland edge of the large lake. Although West Yorkshire was largely covered by the British Ice Sheet during the Palaeolithic period, the potential for recovering any lithics from this period is most likely around the margins of the former Lake Humber.

3.5 The geoarchaeological assessment of historic boreholes within the site did not reveal evidence of lacustrine sediments, which would indicate the presence of the former lake. However boreholes to the north and east of the site did record possible glacial till deposits, which may indicate post-glacial meltwater deposition in the study area. The geophysical survey undertaken in the site indicated an area of increased magnetic enhancement in the north-east which is characteristic of a possible paleochannel, which may date anywhere from the prehistoric to medieval period (Magnitude Surveys 2020).

Mesolithic

3.6 West Yorkshire has the highest density of Mesolithic sites in England, and the area with the most potential for the future discovery of Mesolithic remains primarily lies in areas with peat at an elevation of approximately 380aOD and 430aOD, on south facing slopes with extensive views (WYAAS 2016). There are however fewer artefacts recovered from east of the region, and Mesolithic sites near riverine settings are generally recorded at elevations of less than 100m. The development site lies on a south facing slope at an elevation of between 45m aOD in the north and 28 aOD in the south just above the present course of the River Calder. The geoarchaeological assessment of boreholes within the site did not reveal evidence for areas of peat or deposits suitable for containing any Mesolithic remains.

Neolithic

3.7 Evidence of Neolithic activity is widely spread across the region, and in West Yorkshire finds of stone axes have been recorded at sites near river valleys, in locations also utilised in the Mesolithic period. These axes have been mainly recorded near the River Calder which flows just to the south of the site. This period also saw the beginning of construction of monumental tombs, with communal burials in long barrows or cairns. To the east of the study area adjacent to the A1 is the Scheduled Monument of Ferrybridge Henge, which dates to around 3000 BC. As with long barrows, henge sites are also interpreted as meeting sites, where people gathered together for ceremonies and perhaps exchange of goods or livestock. Where henge monuments are close to river systems, it is thought they were also used as places to trade goods along the Humber and on into Europe. These goods such as axe-heads may have been exchanged to create alliances, make land or marriage agreements, or even have a spiritual or social function such as a purposeful transfer of ideas, passing these from different continents, down through generations. This large site at Ferrybridge includes a number of hengiform and timber circle monuments, which may have preceded the henge, as well as a number of Bronze Age barrows, as well as evidence for an Iron Age and Romano-British farming settlement. Along with the Scheduled Monument of Castle Hill in Almondbury, there is evidence demonstrating that sites in the region which date to the prehistoric period were repeatedly being returned to over thousands of years, possibly because these sites held an enduring ritual, ceremonial or strategic importance to them.

Bronze Age

3.8 Into the early Bronze Age period, activity would likely have continued in and around much the same locations as before, this is demonstrated by the early Bronze Age round barrow burials located around the earlier henge site at Ferrybridge. Across the region, and on the Coal Measures geology (which underlies the development site), round barrows often survive only as ring ditches, with no above ground earthworks. The importance of river sites appears to continue into the Bronze Age, and a basal looped bronze spearhead was found in the River Calder, where it is suggested to have been deliberately deposited (WYAAS 2008). This practice of ritual deposition in rivers or wetland environments continues on into the Iron Age. There are only a few funerary sites recorded in West Yorkshire, and little evidence of ceramics from this period have been discovered.

3.9 By the Middle Bronze Age extensive woodland clearance had been undertaken for more arable and pasture land, and remaining woodland was managed to provide building timber, fuel and some food for livestock. The introduction of field systems is seen at this time with stock enclosures and protected areas for storing or growing crops, and more permanent settlements.

Iron Age and Romano-British

3.10 Those field systems set out by the Late Bronze Age included extensive ditches and enclosures, which are thought to have had a territorial function, marking out borders and dividing up land as the population grew. Defensive structures such as palisaded enclosures began to be used in the Late Bronze Age, and in West Yorkshire several have also been dated to the Iron Age period. Earlier linear boundary features like ditches and droveways, for the movement of livestock such as sheep and cattle, continued to be used into the Iron Age and Romano-British periods.

3.11 Early Iron Age open occupation sites in West Yorkshire can be difficult to identify, as the majority were ‘open’ settlements, without a ditch and bank enclosure. Later in the Iron Age and Romano-British period enclosed settlements became more common and can be readily identified in cropmarks. A number of sites are recorded in the West Yorkshire HER within the 1km study area which likely date to the Late Iron Age to Romano-British periods, comprising cropmarks of enclosures, linear ditches and a trackway Three of the sites are located to the south of Newmarket Lane, with two nearby sites to the west of the former Newmarket Colliery site (now NewCold). The cropmarks demonstrate a semi-circular enclosure and linear feature running south from the possible enclosure, intersecting with short stretches of east-west aligned ditches. A D-shaped enclosure is located approximately 375m south-west of the development site, and this may have functioned as a stock enclosure during the Romano-British period.

3.12 A series of excavations on three sites were undertaken during 2001-2002 prior to opencast coal extraction at Moss Carr to the north, one of which revealed three settlement enclosures containing roundhouses and an area of probable field ditches to the east of the settlement. At least three phases of rebuilding were identified, with a number of pits and postholes recorded, including two areas of possible gatepost entrances to the enclosures. The excavation undertaken at Moss Carr revealed far more complex archaeological remains than had been suggested by the geophysical survey and evaluation trenches, and recorded the survival of structural remains, not usually seen within West Yorkshire.

3.13 In August 2020 a geophysical survey was undertaken as part of the pre-application work for the proposed development across the site north of Newmarket Lane which revealed a pentagonal enclosure, possibly Romano-British in date. Within this feature a number of semi-circular enclosures and pits were recorded, and two possible trackways were identified, the orientation of which suggests that they lead towards this enclosure. A further large rectangular enclosure within internal subdivisions and pits was recorded in the south-east of the development site as well as some possible other features relating to enclosures in the north, centre-east and centre-west of the site. However no specific date was ascribed to these features (Magnitude Surveys 2020).

Roman

3.14 The evidence for the Roman period in the vicinity of the development site comprises the recovery of a number of clay moulds and 40lbs of Roman copper coins found near Roman Station Farm in 1812. The farm was known as Kitching Farm in 1894, the name for which may be derived from the Old English word ‘cycene’, which itself comes from the Latin ‘cocīna’, meaning kitchen. However there is no evidence for Roman settlement at this location.

Early Medieval and Medieval

3.15 Methley is first mentioned in the 1086 Domesday survey as within the wapentake of Agbrigg, named as Medelai. The place name is derived from the Old English and the name is interpreted to mean “a clearing in a wooded area between two rivers”. The pasturable woodland in Methley at the time of the survey was one league in breadth and width. It is likely that the surrounding area had a number of settlement areas which were set in a wider woodland context, providing woodland pasture and plentiful access to timber.

3.16 Farming settlements and field systems into the early medieval period would likely have continued from those set out in the Roman period consisting of small clusters of farmsteads spread across the region. Evidence of the use of the open field farming system is seen within the development site and wider study area in the form of the remains of ridge and furrow earthworks, a result of medieval technique of ploughing arable fields. Within the proposed development site there are areas of plough-levelled ridge and furrow identified during an earlier geophysical survey undertaken to the north of Newmarket Lane, and dated to the medieval period. This was confirmed during the August 2020 geophysical survey which also identified a possible contemporary former field boundary. These remains suggest that the proposed development site may have been part of the open fields of Methley in the medieval period.

Post Medieval to Modern

3.17 In the 16th century Methley comprised around 2,000 acres, consisting of some enclosed arable land, but included four open fields; named East, West, Church and Moorhouse Field. The study area would have continued on into the post medieval period as small dispersed settlement areas in an agricultural and woodland setting.

3.18 The Thomas Jeffrey map of 1771 shows that the current footpath which crosses the west of the site from Newmarket Lane north to Moss Carr Farm and into Moss Carr Wood was extant by this time and was likely a well-used route. Moss Carr Wood is also recorded as formerly Mosker Common of 27 acres in the 16th century, although its name is first recorded 200 years earlier.

3.19 In order to improve land holdings, for better crop output and drainage of the fields around Methley, inclosure was carried out in the surrounding area in the post medieval period. A survey drawn up in 1773 to provide information for inclosure records that by this time Methley had divided up the open fields into eight fields. The field names given include a mixture of Old English and Old Norse words, and indicate the use of this land, which includes areas of water meadows and possible peatland.

3.20 The underlying geology of the study area comprises Coal Measures, and along with fuel from the surrounding woodland, the shallow coal seams across the study area had been exploited domestically since the at least the 14th century, as an alternative to burning wood and charcoal. A number of collieries were set up in the study area, including the site of Newmarket Colliery to the west and south-west of the development site, which was sunk in 1836-7. Opencast workings were also undertaken to the east and west of the development site into the modern period.

3.21 By 1960 electricity pylon towers were erected in the east and west of the site, with the overhead pylon crossing the site parallel to Newmarket Lane. In 1974 the M62 motorway was completed to the north of the development site, the earthworks for which now provide the northern site boundary.

The proposed development

3.22 The proposed development comprises a storage/distribution warehouse (B8 use class) with ancillary offices, new access arrangements from the existing employment estate road, vehicular parking and hardstanding yards, drainage, landscaping and associated infrastructure and engineering works.

3.23 The key activities which will have an effect on the below-ground archaeological remains within the site and its surroundings include site clearance, bulk earthworks, site levelling through cut and fill, installation of drainage, foundation piling, construction of the buildings and relevant infrastructure, and landscaping works.

4.0 Scope of the Archaeological Works

4.1 This WSI sets out the methodology and procedures for an archaeological evaluation comprising trial trenching.

4.2 The scope of the archaeological works has been defined through consultation with the Senior Archaeologist at West Yorkshire Archaeology Advisory Service (WYAAS).

Aims and Objectives

4.3 The aim of the evaluation is to gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of the archaeological features and deposits within the area of interest. The information gained will allow the Local Planning Authority to make a reasonable and informed decision on the planning application as to whether archaeological deposits should, be recorded prior to destruction (whether this be a summary record from a salvage excavation or watching brief, or a detailed record from full open area excavation).

4.4 This approach is in accordance with paragraphs 189, 190, 197 and 199 of the National Planning Policy Framework (NPPF).

4.5 The research objectives of the programme of work will be determined by what archaeological remains are present within the development site. However, subsequent assessment and analysis will be in accordance with relevant objectives outlined in the West Yorkshire Research Agendas (WYAAS 2009)

Monitoring

4.6 The implementation of the works outlined in this WSI will be monitored by the Senior Archaeological Officer at West Yorkshire Archaeology Advisory Service (WYAAS) on behalf of Wakefield Metropolitan District Council (the local planning authority (LPA).

4.7 The LPA and WYAAS will be kept up to date with progress during all phases of the archaeological works, and provision will be made for WYAAS and a Historic England representative to undertake site visits where appropriate during the archaeological fieldwork.

4.8 All archaeological fieldwork will be undertaken by the appointed Archaeological Contractors, Oxford Archaeology North (CIfA Registered Organisation), working under the direction of Jason Clarke, MCIfA at TEP (CIfA Registered Organisation).

5.0 Programme of the Archaeological Works

Archaeological Trial Trenching

5.1 The evaluation will comprise the excavation of 74 trenches measuring 50m x 2m in extent and 2 “areas” or wider trenches of 10m x 10m. Their location is shown on Figure 1, G8326.001 Trench Plan. These have been placed with reference to the overall site geophysical survey by Magnitude Surveys, and take into account a health and safety offset area from overhead power lines which cross the site east to west, and a private buried service which crosses the centre of the site north to south.

Method of Excavation

5.2 The trial trenches will be mechanically excavated using a machine fitted with a 1.8m toothless ditching bucket. Under instruction the topsoil and overburden removed down to the first significant archaeological horizon in successive level spits of a maximum 0.1m thickness.

5.3 All machine work will be carried out under direct archaeological supervision and the machine will be halted if significant archaeological deposits are encountered. The top of the first significant archaeological horizon can be exposed by the machine, but will then be cleaned by hand and inspected for features and then hand excavated.

5.4 All archaeological remains will be hand excavated in an archaeologically controlled and stratigraphic manner sufficient to meet the aims and objectives of the project. The excavation will record the complete stratigraphic sequence, down to naturally occurring deposits and will investigate and record all inter-relationships between features.

5.5 All artefacts will be retained for processing and analysis except for unstratified 20th and 21st century material, which can be noted and discarded. Finds will be stored in secure, appropriate conditions following the guidelines in *First Aid for Finds* (Third edition, 1998).

Unexpectedly Significant or Complex Discoveries

5.6 Should the works encounter unexpectedly significant or complex discoveries made that warrant, in the professional judgement of the archaeologist on site, more detailed recording than is appropriate within the terms of the specification provided by WYAAS, then TEP will contact the WYAAS with the relevant information to enable them to resolve the matter with the client.

5.7 Should remains or features of possible national archaeological importance be observed, fieldwork will cease on the relevant part of the site until these remains have been inspected by West Yorkshire Archaeology Advisory Service (as advisors to the Local Planning Authority) and the appropriate Historic England Inspector of Ancient Monuments.

Method of Recording

5.8 The trenches will be recorded according to the normal principles of stratigraphic excavation. The stratigraphy of each trial trench will be recorded even where no archaeological deposits have been identified. Where no archaeological features are present representative sections or soil profile will be recorded and illustrated in the report. All fieldwork will be undertaken in accordance with the requirements of the OA Field Manual and the revised OA Fieldwork Manual.

5.9 Discrete features will be half-sectioned, or fully excavated if features are part of recognisable structures, contain deposits or artefacts of particular value, or likely to hold significant artefact or environmental assemblages. Intersections will be investigated to establish strategic relationships. Representative sections of linear and curvilinear features will be sample excavated away from intersections or other features or deposits, to obtain unmixed samples of material.

5.10 The areas of trenching and any features of possible archaeological interest noted within the trenches will be accurately located on a site plan with levels at the top and base of features and recorded by photographs, summary scale drawings and written descriptions sufficient to permit the preparation of a report on the material. The site grid will be accurately tied into the National Grid and located on the largest scale map available of the area (either 1:2500 or 1:1250).

5.11 Care will be taken to record artefacts in their correct stratigraphic position, when present to facilitate accurate dating of deposits and features.

Photography

5.12 Black and white photography using orthodox monochrome chemical development will form the primary photographic record. Film should be no faster than ISO400. Slower films will be used where possible as their smaller grain size yields higher definition images. The use of Technical Pan (ISO 25), Pan-F (ISO50), FP4 (ISO125) and HP5 (ISO400) is recommended by WYAAS. Black and white photography will also be supplemented by colour photography, in transparency format.

5.13 Digital photography may be employed as an alternative to the use of colour transparencies. Supplementary photography will be undertaken using a digital SLR camera with a sensor of a minimum of 12 megapixels; each image will be supplied as both a JPEG and a TIFF versions (version 6 file of not less than 25Mbs). The Archaeological Contractor will also include metadata embedded in the TIFF file, which will include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph. Any digital images are to be supplied to WYAAS on gold “archive quality” CDs, accompanying the hard copy of the report.

5.14 All photography will be undertaken in accordance with Historic England guidance, Digital Image Capture and File Storage: Guidelines for Best Practice, 2015. Photographic scales of appropriate sizes will be placed within all shots if possible.

Use of Metal Detectors on Site

5.15 The site will be scanned during machine excavation to attempt to obtain a sample of artefacts from the top and sub–soils. The exposed site and, spoil heaps will also be scanned for both ferrous and non-ferrous metal artefacts using a metal detector capable of making this discrimination, operated by an experienced metal detector user (if necessary, operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (19th-century material and earlier will be retained.)

5.16 The make and model of the instrument used will be given in the methodology section of the Archaeology Contractor's report and metal detected finds identified in the relevant section.

Human Remains

5.17 If human remains are encountered during the excavations, they will be left in situ, covered and protected, and WYAAS and the Coroner are to be notified. If it is deemed appropriate to excavate human remains, this will be done in accordance with appropriate Historic England and Chartered Institute for Archaeologists guidance (e.g. *CIfA Technical Paper 14 Excavation and Post-excavation Treatment of Cremated and Inhumed Remains*). Excavation, removal from site, analysis and final placing will all be subject to the requirements of the appropriate Ministry of Justice licence and any local environmental health regulations.

Treasure

5.18 If any artefacts are encountered that would constitute ‘treasure’ as defined by The Treasure Act, 1996 and the Treasure (Designation) Order 2002, they will be reported to the local Coroner and relevant Finds Liaison Officer. Any artefacts deemed to be Treasure should be excavated on the day they are discovered and removed to a secure site. If this is impractical then appropriate security provided until full excavation and removal can occur.

Environmental Sampling Strategy

5.19 The geoarchaeological assessment undertaken in August 2020 did not identify specific conditions within the site that would hold deposits suitable for the study of past environments. These would most commonly occur in the form of subsurface peat layers, but are also taken to include all waterlogged deposits. The further investigation and identification of any extant suitable areas within the site will take place during the archaeological evaluation.

5.20 Should any such deposits exist within the development site, samples will be taken by a suitably qualified specialist sub-contractor. The samples would be assessed for their potential by internal or external specialists of the Archaeological Contractor, and suitable techniques applied to sub-sample from select cores to determine the preservation and taxonomic diversity within the samples. This is likely to include assessing for one or more of the following:

- Pollen (focussing on organic units)

- Diatoms (focussing upon lithological transitions within and at the base of the Holocene sediment stack)
- Foraminifera (focussing on mineral strata and in particular on transitions)
- Plant macro-remains (focussing on organic units)

5.21 Samples for scientific dating (radiocarbon dating, archaeomagnetic dating, dendrochrology, optically stimulated luminescence etc.) will be taken if suitable material is encountered during the evaluation and assessed for suitability by an environmental specialist prior to submission to a dating laboratory. Any human remains submitted for C14 dating will also have carbon (delta 13C) and nitrogen isotope analysis carried out by the radiocarbon laboratory. The Historic England Science Advisor for Yorkshire will be consulted where appropriate.

5.22 Bulk samples will be taken from all securely stratified deposits using a strategy which combines systematic and judgement sampling, but which also follows the methodologies outlined in the *English Heritage (2011) 'Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (Second Edition)*' guidance.

5.23 All samples will be processed and retents scanned with a magnet to recover micro-slags. A statement on the environmental potential of the excavated deposits will be a distinct part of the environmental report.

Finds

5.24 On completion of the fieldwork, any samples taken will be processed and any finds will be cleaned, identified, assessed/analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines and best practice.

5.25 All finds and biological material will be analysed by a qualified and experienced specialist and treated in accordance with current best practice as set out in Chartered Institute for Archaeologists and Historic England guidance.

5.26 The Archaeological Contractor, their specialists and the District Museum Archaeological Curator will develop an archive material selection plan based on the significance of the material excavated and its ability to answer the project's and other more general research questions. This process will include the views of the District Museum Archaeological Curator, WYAAS and relevant and experienced specialists. The archive selection plan should be explicitly detailed in the archaeological report.

Conservation Strategy

5.27 A conservation strategy will be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. Artefacts of a “displayable” quality would require full conservation. Metalwork and coinage from stratified contexts are to be X-rayed if necessary.

5.28 The report will include a discussion of geology, soils and drainage with specific reference to the potential for the site to contain water-logged remains or localised anoxic conditions and have specific reference to the nature and degree of preservation of different classes of artefacts and ecofacts that have been recovered and that may be anticipated across the rest of the site.

Programme

5.29 It is anticipated that the works will happen in accordance with the following programme:

- September 2020 - submit WSI for approval by WYAAS
- September 2020 - undertake excavation of trial trenches
- +4 weeks - report
- +8 weeks - deposit archive

Organisation and Key Personnel

5.30 TEP is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA). The heritage team is under overall management of Ian Grimshaw BA (Hons) MA (LM) MSc CMLI MRTPI, Director.

5.31 The archaeological works will be undertaken Oxford Archaeology North and will be managed by Jason Clarke BSc MA MCIfA, Principal Historic Environment Consultant (TEP).

6.0 Reporting

6.1 In accordance with the principles of Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2015) and the Management of Archaeological Projects, 2nd Ed (MAP2) (English Heritage 1991), a programme of post-excavation assessment and reporting will be undertaken, to commence on completion of the archaeological fieldwork.

6.2 In the event of negative, or non-complex findings, a report will be produced detailing the results of fieldwork within four weeks of the end of fieldwork and archived within six months. The report will include;

- a front cover to include the NGR, and HER reference number
- a concise, non-technical summary of the results,
- the circumstances of the project and the dates on which the fieldwork was undertaken,
- description of the methodology, including the sources consulted,
- a very brief summary of the historical background of the study area,
- a copy of this project design, and indications of any agreed departure from that design,
- the report will also include a complete bibliography of sources from which data has been derived, and a list of any further sources identified but not consulted,
- a site location plan related to the national grid,
- appropriate plans showing the location and position of trenches, features or sites,
- plans and sections showing the positions of deposits and finds,
- illustrative photographs as appropriate,
- coordinates (latitude/longitude) of relevant sites if archaeological remains have been discovered.

6.3 Section drawings will be provided in all evaluation trenches which contain archaeological features (at a minimum scale of 1:20).These will include heights O.D. Plans (at a minimum scale of 1:50), and O.D. spot heights for all principal strata and any features. Drawings of one long section of trenches without archaeological deposits will also be provided.

6.4 Artefact analysis will include the production of a descriptive catalogue, quantification by context and discussion/interpretation if warranted, with finds critical for dating and interpretation illustrated.

6.5 Environmental analysis will include identification of the remains, quantification by context, discussion/interpretation if warranted, and a description of the processing methodology. Radiocarbon results will be presented in full (laboratory sample number, conventional radiocarbon age, delta C13 value, calibration programme). Copies of the laboratory-issued dating certificates will be included as an appendix to the report.

6.6 Pottery reports will refer to the appropriate type series

7.0 Archive

7.1 The archive of the results of the archaeological work will be undertaken in accordance with *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation (Archaeological Archives Forum, 2011),* current English Heritage guidelines (*Management of Archaeological Projects, Appendix 3, 2nd edition, 1991*) and *Chartered Institute for Archaeologists Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (CIfA 2014).

7.2 A fully indexed field archive will be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints/slides.

7.3 An index to the field archive will be deposited with the West Yorkshire Archaeology Advisory Service. The original archive will accompany the deposition of any finds.

7.4 A hard copy of the final report (plus a digital copy on "archive" quality gold disk in ISO 10005-1 compliant (PDF/A) format) will be submitted to the West Yorkshire Historic Environment Record to enable the results of fieldwork to be made publically accessible as required by the National Planning Policy Framework.

7.5 A copy of the final report (in .pdf format) shall also be supplied to Historic England's Science Advisor for Yorkshire.

7.6 A note or longer article will also be supplied to the next volume of the annual Council for British Archaeology's Yorkshire Forum publication.

7.7 Details of the work will be entered on the OASIS database at http://ads.ahds.ac.uk/projects/oasis.

8.0 Health and Safety

8.1 The archaeologists on site will naturally operate with due regard for Health and Safety regulations. Where archaeological work is carried out at the same time as the work of other contractors, regard should also be taken of any reasonable additional constraints that these contractors may impose.

8.2 All work on site would be undertaken strictly in accordance with the project health and safety plan and task specific risk assessments. All companies working on the project will adhere to the Client's required quality, health, safety and environment controls.

8.3 Access routes to working areas would be specified by the Client and access would only be permitted to those routes and the area of the fieldwork. The Client will provide the archaeologist with the details for any known constraints prior to the start of the archaeological works. The Archaeological Contractors will be responsible for locating any drainage pipes, service pipes, cables etc. which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services. TEP have provided this information to the Archaeological Contractors.

8.4 All site staff, including subcontractors and visitors will have the necessary competencies (e.g. CITB training for machine operators and CSCS cards) and any other necessary health and safety qualifications.

8.5 All site staff will familiarise themselves with the following:

- site emergency and evacuation procedures;
- the site's health and safety coordinator;
- the first aider; and
- the location of the nearest hospital and doctor's surgery.

8.6 The Archaeological Contractor will maintain a record of site attendance for each day that they attend site for the archaeological works.

8.7 All site staff personnel will wear PPE consisting of gloves, hardhat, steel toe-capped boots with mid-sole protection and high visibility vest or jacket at all times. All equipment must be 'fit for purpose' and be maintained in a sound working condition that complies with all relevant Health and Safety regulations and recommendations, including;

- Coronavirus (COVID-19) Government Guidance for Working Safely;
- Health & Safety at Work Act 1974;
- Management of Health & Safety at Work Regulations 1999; and
- COSHH Regulations 2005.

8.8 The Archaeological Contractor will have their own Health and Safety policies compiled using national guidelines, which conform to all relevant Health and Safety legislation and best practice. The RAMS provided by the Archaeological Contractor will include a specific section covering Coronavirus (COVID-19) for working safely.

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West Yorkshire Archaeology Advisory Service, 2018, An Archaeological Research Agenda for West Yorkshire: Medieval Rural Settlement

436200 436400 436600 436800 437000

426000 425800 425600 425400

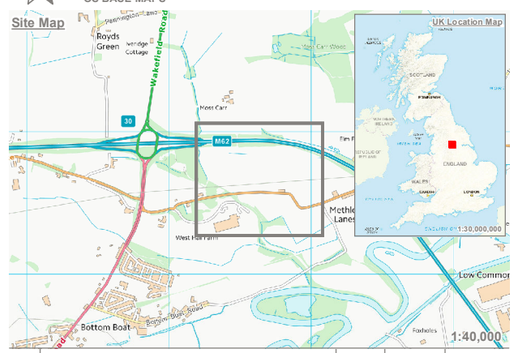
T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 T16 T17 T18 T19 T20 T21 T22 T23 T24 T25 T26 T27 T28 T29 T30 T31 T32 T33 T34 T35 T36 T37 T38 T39 T40 T41 T42 T43 T44 T45 T46 T47 T48 T49 T50 T51 T52 T53 T54 T55 T56 T57 T58 T59 T60 T61 T62 T63 T64 T65 T66 T67 T68 T69 T70 T71 T72 T73 T74 T75 T76

KEY

- Proposed trenches
- Geophysics survey polylines
- Geophysics survey - archaeology
- Geophysics survey - natural
- Service exclusion zones
- Development area

Metres
0 50 100 200

Site Map



Rev	Description	Drawn	Approved	Date
A	Updates as requested by County Arch. T5 & T9 rotated to be perpendicular to feature. T51 & T70 changed to 10mx10m	SJB	SHB	10.09.20

THE ENVIRONMENT PARTNERSHIP
The Reynard Suite - First Floor Offices,
Bowden Inn Farm, Market Harborough, LE16 7SA
Tel 01858 353120 e-mail tep@tep.uk.com www.tep.uk.com

Project
Newmarket Lane, Plot 4

Title
Trench layout

Drawing Number
G8326.001A

Drawn	Checked	Approved	Scale	Date
AB	SA	SHB	1:3,000 @ A3	10/09/2020

APPENDIX A: Risk Assessment Method Statement (RAMS) Oxford Archaeology North 2020

Oxford Archaeology Method Statement and Risk Assessment for Archaeological Evaluation at Newmarket Lane, Methley, West Yorkshire

oxfordarchaeology

Method Statement and Risk Assessment (RAMS)

Archaeological Evaluation at Newmarket Lane, Methley, West Yorkshire

Invoice Code: L11324EV

OA Document File Location:	X:\Paul\Projects\L11324_Newmarket_Lane\Evaluation\H&S
Issue No:	V. 1
Date:	September 2020
Prepared by:	Paul Dunn (Senior Project Manager)
Checked by:	Paul Dunn (Senior Project Manager)
Reviewed and Approved for Issue by:	Alan Lupton (Operations Manager)
Signature:	

Template Issue No: 3.1
Date: August 2020
Updated by: D Poore CBO

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Introduction

This document is a combined Method Statement and Risk Assessment that sets out the proposed methods by which the fieldwork will be carried out, with details of supervision arrangements and the approach to management of key risks, based on a detailed assessment of the site's hazards. It comprises:

- A project/task overview presenting the key information;
- A description of the methodologies and procedures to be followed;
- The Risk Assessment.

It should be implemented and read in conjunction with the OA **Site Safety Procedures Manual and the addendum for the Site Specific COVID 19 measures, included within this document**.

All staff will be briefed on the safe system of work for the site as defined by this Method Statement and Risk Assessment, by means of initial Project Inductions, weekly briefings, task specific briefing and toolbox talks. The Project Officer/Supervisor will adhere to the OA Site Safety Procedures Manual at all times.

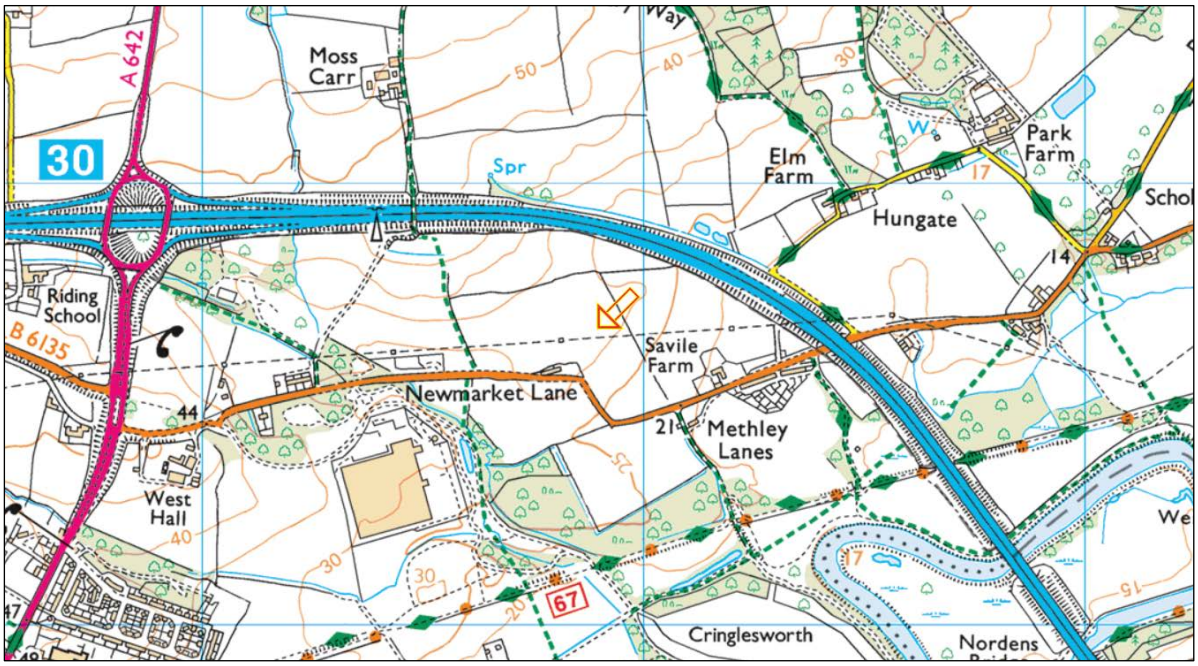
Project/Task Overview

Site Location (NGR)	SE 36895 25668
Address	Newmarket Lane, Methley, West Yorkshire, LS26 9DP
Date and Duration of work	14th September 2020 for 4 weeks
Oxford Archaeology Contacts	Project Manager, Paul Dunn, Phone no: 07584 501 570
	Project Officer, Helen Stocks-Morgan, Phone no: 07584 501 548
	Supervisor, Bryan Antoni, Phone no: 07584 501 561
	First Aiders, Helen Stocks-Morgan and Bryan Antoni
Client Contacts	TEP, Historic Environment Consultant, Sarah Hannon-Bland, Phone no: 07703 107909
Subcontractor Contacts	Plant Hire, Fairfax Plant Hire, Matthew Herald, Phone no: 0113 353 5353
	Welfare Hire, Sunbelt Rentals, Michelle Hirst, Phone no: 01924 279 423

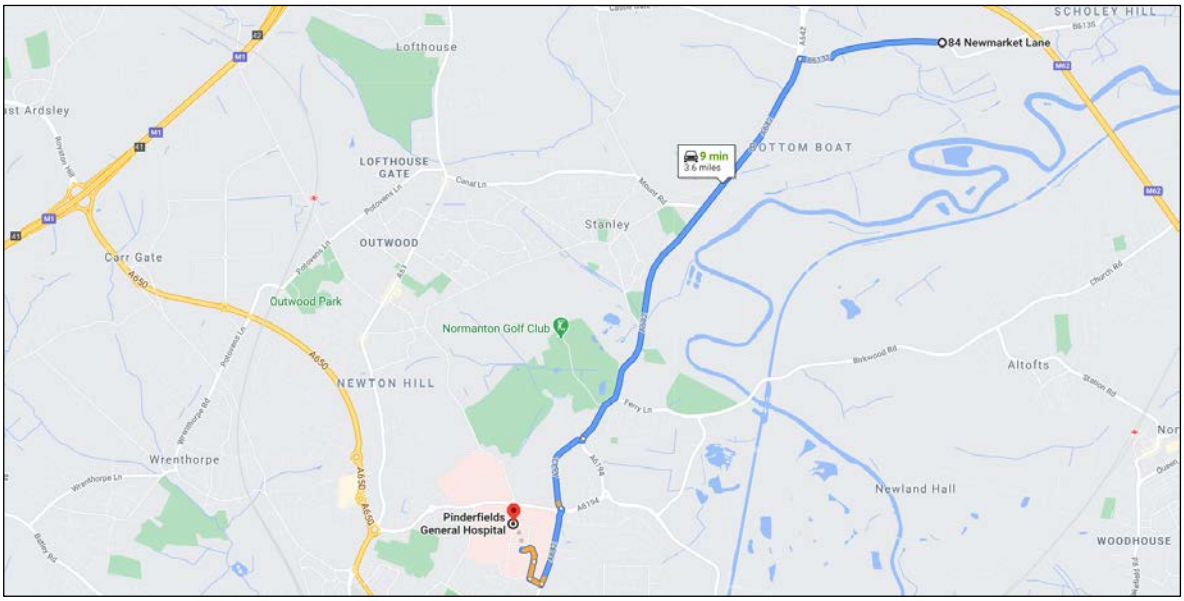
Briefing of Project Officer /Supervisor in charge of the Work	I confirm that I have read and understand the requirements of this Method Statement and associated Risk Assessments and will ensure their communication to all operatives under my control and to those who may be affected by its requirements Print name: Signed: Date:

Emergency Procedure	Evacuation Procedure
1) Give first aid **2) Dial 999 provide site address** **3) Direct emergency vehicles** **4) Inform all relevant parties**	**1) Sound the alarm** **2) Evacuate safely to assembly point** **3) Take register** **4) Follow emergency control instructions**

Nearest Hospital: Pinderfields Hospital, Aberford Road, Wakefield, West Yorkshire, WF1 4DG
Tel no: 01924 541 000



Site Location



Hospital Location

Project Description and Duration	Seventy-six trenches measuring 50m by 2m will be excavated across the site at pre-determined locations (see Written Scheme of Investigation), targeting geophysical anomalies. Initial archaeological work in each case will consist of the removal of the existing topsoil and subsoil within the area of the trench until the natural geology or the first significant archaeological horizon is identified, whichever is identified first. Exposed archaeological features will then be investigated by hand as per the methodology outlined in the Written Scheme of Investigation in order to achieve the aims of the evaluation. It is anticipated that the trenches will not exceed a depth greater than 0.5m. However, trenches will not be excavated beyond a safe working depth of 1.2m. If natural geology or the first archaeological horizon is not identified within 1.2m depth, isolated sondages will be excavated to proof dig the level of the natural geology, these will not be entered by anyone, being recorded by photographs from outside of the trench and backfilled as soon as possible. The works are anticipated to take 20 days on site by a team consisting of a Project Officer, Helen Stocks-Morgan, a Supervisor, Bryan Antoni, and three technicians, Zoe Clarke, Alicia Senelle and Holly Wright. The archaeological team will be supported by two 13 tonne mechanical excavators, fitted with toothless ditching buckets. The project will be managed for OA North by Paul Dunn, Senior Project Manager (Curriculum Vitae for the Project Manager, Project Officer and any potential in house specialists is attached).

Personnel, Plant and Equipment

Personnel	**Required Competence**	
	Minimum Training (note – all staff will have a CSCS card as standard, and will have received introductory H and S Training as part of their OA Day 1 Induction)	*Experience in commercial archaeology (durations are indicative – will also be dependent on aptitude)*
Project Manager	SMSTS	10 years
Project Officer	SSSTS, 1st Aid at Work, CAT and Genny, Drivetech Driver Assessment, Asbestos Awareness	6 years
Supervisor	SSSTS, 1st Aid at Work, CAT and Genny, Drivetech Driver Assessment, Asbestos Awareness	3 years
Plant Marshal	NPORS N133 Plant Marshal *or* CITB General Awareness when working with Construction Plant	2 years
CAT Scanner	Cat and Genny	2 years
Assistant Supervisor	All H and S elements of the OA 'Archaeologist to Assistant Supervisor' training course (or equivalent)	2 years
Archaeologist	All H and S elements of the OA Graduate Trainee scheme (or equivalent)	6 months
Trainee archaeologist	CSCS card (CITB H and S test)	n/a
Welfare arrangements		
25' welfare cabin with office, canteen and toilet facilities		

Plant			
Item	**Type**	**Specific Requirements**	**Certificates Viewed?**
Mechanical Excavator (2x)	13 tonne 360 tracked		
Equipment and Materials			
Item	**Type**	**Specific Requirements**	**Competent Operator?**
Cable Detection Tool	Cat & Genny	GPS logging	
DGPS	Leica G07	N/A	
Goal Posts	Goal Posts	N/A	

PPE	
Item	**Activity**
Hi-vis (vest)	All
Hi-vis waterproofs	All
Hard hats	All
Safety boots	All
Gloves	Dynamic Risk Assessment
Protective eyewear	Dynamic Risk Assessment
Ear protection	Dynamic Risk Assessment
FFP3 facemasks (fitted) and overalls	Designated contamination zones

Protection and Exclusion	
Safe System of Work/Procedure	**Additional information (also see Methodology and Procedure, below)**
Plant/pedestrian routes defined	Plant will follow pre-defined routes between the trenches
High Voltage Overhead Cable	There is a high voltage overhead cable running through the site. Goal Posts will be erected at safe crossing points. Trenches have been placed outside of an exclusion zone either side of the cables

Tasks and Sequence of Work

Order	Task	Description
1	Induction	Project officer to give (and record) OA North's induction to OA North staff and plant operators
2	Briefing	Brief plant operators – establish protocols and signals
3	Set-out	Survey and demarcate trench locations
4	Initial and continual buried services CAT scan	Suitably experienced and qualified operative to undertake service checks and scans using CAT. To continuously scan for services at 0.20m spits
5	Mechanical trench excavation	Excavators to reduce ground in 0.20m spits under archaeological supervision; depth not to exceed 1.2m. Spoil to be stockpiled either side of the trench.
6	Hand excavation	Hand excavation and recording according to archaeological methodology
7	Reinstatement	Excavators to reinstate the trenches

8	Demobilisation	Report to Manager and PC and advise them of the status of the site and that OA are demobilizing. Return archive and equipment to OA.

Site Information:

The following list sets out key information which must be requested from the Client and used when assessing risk, and in advance of mobilisation to site. Please record which of these (and any other specific Site Information) have been requested, which have been supplied, and how this information (or the lack of it) has been used.

Services Plans (buried and overhead):	Requested Yes	Received Yes	Measures taken – provided by the client, the trenches have been placed to avoid services (including Overhead Power Line). Trenches will be scanned by CAT prior to and during excavation
Contamination Information/Survey, including Asbestos:	Requested Yes	Received Yes	Measures taken – provided by the client. None identified
Access Arrangements inc Landowner/Tenant details:	Requested Yes	Received Yes	Measures taken – to be confirmed by the client
Arrangements for Preventing Unauthorised Access to Site:	Requested Yes	Received Yes	Measures taken – the site is relatively secluded, trenches will be demarcated by spoil being stored either side of the trench
Client/PC procedures for control of spread of COVID 19	Requested Yes	Received Yes	Measures taken – see COVID 19 RAMS to the rear of this document

Methodology and Procedure

Supervision Arrange-ments	OA North is the Lead Contractor, and will control all aspects of the Safe System of Work for the site. This RAMS document covers all risks associated with OA's activities on site. It should also consider hazards posed by the activities of other contractors on site, where those hazards might pose a risk to OA employees. Dan Poore, Chief Business Officer, is the OA Director with responsibility for Health and Safety. He is advised by OA's Health and Safety Advisors (Ken Welsh (OAS), Anthony Haskins (OAE) and Fraser Brown (OAN)). Paul Dunn, OA Project Manager (who will be based in the Lancaster office), has produced this RAMS, and will monitor its implementation; he will note any changes of circumstances which may affect health and safety, and amend the RAMS if necessary. The Project Manager will ensure that the following information is displayed/available on the site: copy of the HSE poster 'Health and Safety Law - What You should Know', Construction Phase Plan (if applicable), the RAMS, the Site Safety Procedures Manual, Emergency Information Sheet giving details of nearest hospital etc.

	Day-to-day Site Supervision will be by Helen Stocks-Morgan, OA Project Officer, who will be based on site full-time, and who will implement the requirements of this RAMS, under the overall direction of the Project Manager. If Helen is not on site, she will delegate this responsibility to another member of the site team or other replacement (an Assistant Supervisor or above) who will be fully briefed in their responsibilities.
Monitoring Systems	Monitoring will be undertaken by an OA Health and Safety Adviser, using the proforma contained within the OA Site Safety Procedures Manual (SSPM - copy available on request). During these inspections the SSPM Safety Checklist will be examined to ensure full compliance with the OA Safe System of Work. The Project Manager will also undertake and record regular H and S Monitoring visits.
Operational Sequence	<u>Prior to Excavation</u> The OA surveyor will set out each agreed trench locations using a GPS. Once the trench has been set out, the OA Project Officer will check the surveyed trench locations against service plans provided and ensure that a full CAT scan is carried out before the ground is broken and at regular depth intervals thereafter, in order to avoid any services not located on the service plan. Trenches may be relocated, if necessary, to avoid services. Any services, either buried or overhead, will be marked out (with a clear visible marker such as a line of cones and rope) to indicate buffer zones that plant must not enter. Crossing points will be set out using goalposts. <u>Trench excavation</u> The OA Project Officer will ensure the plant operator has a valid CPCS/NPORS ticket. Careful mechanical excavation of the trench will take place in horizontal spits of 200mm or less. Topsoil and sub-soil will be stored in separate stockpiles, topsoil will be on one side of the trench and subsoil on the other. <u>Hand excavation and recording</u> Archaeological features within the trench will be sampled by hand excavation and recorded according to the procedure set out in the Written Scheme of Investigation and in accordance with the OA Field Recording Manual and OA Crib Sheets. If safe to do so, trenches will be left open until the county archaeologist has viewed the trenches and/or given his permission for the trenches to be backfilled. <u>Backfilling and reinstatement</u> Trenches will be backfilled with the arisings from the trench in reverse order of excavation. The spoil will be compacted using the mechanical excavators bucket and by the weight of the machine tracking across the excavation. No specialist reinstatement will take place. Trench locations will be left as neat and tidy, and as level as practicable.
Plant	Mechanical excavator: The mechanical excavator and qualified operator will be provided by Fairfax Plant Hire. The operator will be responsible for the safe maintenance of the machine – certificates will be requested at point of hire. The on-site Project Officer or the person he delegates to supervise the machine excavator (the Machine Supervisor) will satisfy her/himself that the operator possesses an adequate level of skill. If the operator cannot control the

	machine in a reasonably smooth and careful manner, a replacement operator should be requested. The specific responsibilities of the Machine Supervisor will be to: brief the machine operator as to what is required, indicate where work is to begin, and walk over this area with the machine operator. make sure that the area around the machine is clear of personnel and of any obstructions before indicating to the machine operator to start work. take up a position in front of the machine where she/he is clearly visible to the operator, and out of the swinging radius of the machine. communicate with the machine operator by hand signals as follows: clear downward pointing action = start work (usually accompanied by an indication of the depth of soil to be removed, eg 1 finger = approx. 1 inch). both hands held up with palms towards driver = stop (the operator should lift the bucket out of the trench and rest it on the spoil heap). one hand moved away from the body with palm pointing downwards = clear loose spoil from excavated area but no further excavation. The machine supervisor must make absolutely sure that the operator understands these signals, and must not enter the swinging radius of the machine until the machine bucket has been rested outside the trench, and when she/he is certain that the machine has ceased to work. The specific responsibilities of the Machine Operator will be to: Follow the site rules and instructions given during induction Follow the instructions of the Machine Supervisor Help ensure that the Machine Operator is working safely by stopping work if they observe unsafe behaviour (e.g. entering the swinging radius of the boom when the excavator is working), and reporting such behaviour to the Project Officer/Supervisor. Members of the project team present on site while a mechanical excavator is working must keep well clear of the excavator. They must not work within the swinging radius of the bucket arm except as defined below. They must wear hard hats and high-visibility vests at all times. Members of the project team who need to approach the area where the mechanical excavator is working will approach so as to be visible to the operator and the Machine Supervisor. They should make their presence known to the Machine Supervisor and should not signal to the machine operator. When the mechanical excavator is working, members of the project team may only enter into, and work in, the part of the trench behind the machine supervisor (i.e. the machine supervisor must be between them and the machine) – or a safe distance to the rear or side of the mechanical excavator – at least 20 metres. For guidance, please see two Balfour Beatty 'Plant Interface Zone' diagrams, for a 360˚ Excavator and an Articulated Dumper, at the end of this document.
Traffic Management	Plant and Pedestrian routes will be segregated as far as is reasonably practicable, and the hazards associated with plant movement will be clearly explained at induction and through regular briefings.

	The Traffic Management Plan Loading / unloading Deliveries or collections of plant to and from the site must be planned and managed with care. Delivery vehicles (e.g. Low loaders) must be ensured adequate parking and turning space without risk to other road users, so wherever practicable a loading area must be available off the public road i.e. within the site or in a safe layby or similar. OA staff must be in attendance when plant deliveries/collections are made to ensure they are undertaken safely and as per the requirements of the Traffic Management Plan. Plant movements All mechanical excavator movements will be undertaken under the supervision of a banksman, who will ensure that pedestrians are fully aware of the plant and kept to a safe distance. When working (i.e. excavating or backfilling trenches) the plant will be under the control of the Plant Supervisor, who will again ensure that plant /pedestrian interfaces are arranged safely. Other staff will not normally work in a trench that is being excavated; if they do, they must be at least 10 m from the front of the machine, with the Machine Supervisor between them and the excavator.
Lifting	Lifting operations are often necessary during delivery and removal of equipment from sites – e.g. welfare cabins, portable toilets, fencing etc. OA will use qualified sub-contractors for these lifting operations and will obtain evidence that the lifts have been planned properly, and will be undertaken and supervised by competent operatives, and in a safe manner. OA staff will be briefed by the Project Officer/Supervisor and will maintain a safe distance from all lifting operations.
Access	The main point(s) of access is via Newmarket Lane, Methley, West Yorkshire (please also refer to Traffic Management, above). Access to trenches will be confined to OA staff and their sub-contracted staff only.
Services	OA staff will be briefed to assume all services are live, and in the correct procedure in the event of location of services. Service location plans have been provided by the client and trenches have been located to avoid these known services. The utilities service provider has been consulted about work proposed in the vicinity of their services. Trench locations will be scanned with a cable avoidance tool prior to excavation and relocated if necessary. Known services will be marked out as appropriate, with exclusion zones set out (e.g. using ropes and cones) to ensure that plant does not access or operate within those zones. Crossing points will be set up using goalposts. A known Overhead Power Line extends east/west through the site, the trenches have been positioned outside an exclusion zone. Goalposts will be erected at crossing points.
Hazardous Substances	Ground contamination: There was no known ground contamination identified in the ground investigation report
Accidents and Incidents	Details of OA's accident and incident procedures can be found in OA's Site Safety Procedures Manual which forms part of the on-site Health and Safety file. First Aid: The regulations require that your risk assessment considers the appropriate level of 1st Aid cover necessary for each site. You must consider the size of the team, the nature of the

	hazards present (e.g. plant on site, working in deep excavations), the remoteness from the emergency services and whether the site is shared with other contractors engaged in hazardous activities. If you feel that a first aider is required for your site, please advise the Head of Fieldwork (or regional equivalent). If you are unclear about 1st Aid provision, please ask a Health and Safety Advisor for guidance. If you do not need a First Aider, you will need as a minimum an 'Appointed Person', whose responsibility is to take charge when someone is injured or fall ill, and who calls an ambulance if necessary. The appointed person also looks after and re-stocks the 1st Aid box. There will be at least one first aider on the OA team as far as practicable. They will maintain a full 1st Aid kit on site at all times, and all staff will be briefed as to its location and the identity of the 1st aider, during their induction. An accident book will also be on site at all times. Number of First Aiders required: 1 Names of First Aiders: Helen Stocks-Morgan and Bryan Antoni <u>Covid 19 Specific Measures for 1st Aid</u> If you do need to provide assistance to an individual who is symptomatic and identified as a possible case, wherever possible, place the person in a place away from others. If there is no physically separate room, ask others who are not involved in providing assistance to stay at least 2 metres away from the individual. If barriers or screens are available, these may be used. Type IIR surgical masks will be issued (one to each site and office). These masks are to be used for 1st Aid if someone with COVID-19 symptoms requires 1st aid and the 2m rule cannot be complied with. The mask should be work by the person providing the first aid. (The masks are not to be used simply when someone has symptoms – normal social distancing measures and hygiene are considered sufficient for these situations.) If CPR (cardiopulmonary resuscitation) is required for an individual, do NOT perform rescue breaths. If the person develops symptoms at work then they will need to go home (assuming they do not have severe symptoms, in which case NHS 111 or 999 if it is a medical emergency). If they cannot make their own way home it will be necessary to assist them. Staff should assess the risk of driving people to their home, as public transport may not be an option. The largest available vehicle should be used to ensure them maximum gap between the ill person and the driver, and with the windows open (weather permitting). After assisting a person with symptoms, wash hands carefully and wash down any surfaces that the person has been in contact with. Contact a member of the OA Management Team of an H and S advisor, who will record the incident and also inform the person's next of kin that they have been taken ill and sent home.
Fire	In the event of a fire on site or in the welfare facility the emergency procedure will be followed – please see above in the Project/Task Overview section. In accordance with **Fire safety in construction** (HSG168, 2010) all welfare facilities (or 'temporary accommodation units') will be equipped with fire extinguishers. Staff will be briefed using the OA Tool Box Talk on Fire.

Environ-mental Issues	Spill kits: Spill (oil or diesel oil) kits are provided for all sites. Additional plant nappies are also provided for portable generators. An OA Tool Box Talk document explains what to do in the case of accidental spillage of oil or diesel fuel. POs/Supervisors must inform the Environmental Officer in case of any spillage on site, using the OA H and S and Environmental Incident Reporting Form. Waste Management: The field staff received detailed instruction how to handle site waste. All waste (general, recycling or hazardous) produced on site must be returned to the offices and placed into the appropriate disposal containers. Appropriate PPE and collection equipment will be provided to handle any type of waste. OA are registered with the Environment Agency as a 'Lower Tier Waste Carrier'. OA's Environmental Policy provides further information about waste management on site. Environmental Incident Report System: All environmental incidents or near-misses must be report to the Environmental Officer using the OA H and S and Environmental Incident Reporting Form, available on the OA Cloud or in the Site Health, Safety and Environmental folder. All reported incidents or near-misses will be investigated by the Environmental Officer.
UXO	Consultation of the Zetica bomb risk map (www.zetica.com) suggests that there is a low risk of WWII related unexploded ordnance at the site. Although there is a low risk of UXO, all staff will be alerted to OA's Suspicious Object procedure during induction.
COVID-19 (coronavirus)	COVID-19 is a potentially fatal respiratory illness and all reasonably practicable measures must be taken to avoid infection. Please see OA's advice on the OA Forum at https://discuss.oacloud.org/t/coronavirus-information-and-advice/521/15 Please also see the **addendum for the Site Specific COVID 19 measures, included within this document** for measures designed to reduce the spread of the virus while working on site. Regular information and updates relating to COVID-19 will be provided through site briefings and toolbox talks. The information is based on current UK Government medical advice, and can be found on the OA Forum (https://discuss.oacloud.org/t/coronavirus-information-and-advice/521/15), speak to your Line Manager, Supervisor/Project Officer/Project Manager, or Regional H and S Advisors or a Prospect Union H and S Rep.

Risk Assessment

The following is a list of common risks, and suitable controls. Please review carefully, decide whether they apply to your project and complete Column 4. If Yes, add any further site-specific controls that might be necessary (in Column 5), beyond those already detailed, or follow the instructions given. If No, delete or strike-through the contents of Columns 5 to 7. If there are risks on your project that are not detailed below please add them, and appropriate controls, to the Additional Risk Assessment table below.

Guide to the risk levels:
Insignificant: No action required and no documentary records need to be kept.
Low: No further preventative action. Monitoring required to ensure that controls in place are properly maintained
Medium: Work shall not be started or continued until the risk has been reduced.
High: Work shall not be started or continued until the risk level has been reduced. While the control measures selected shall be cost-effective, legally there is an absolute duty to reduce the risk, which means that if it is not possible to reduce the risk even with unlimited resources, then the work shall not be started or shall remain prohibited

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
Lack of understanding of the site and its hazards	Personal injury	Medium	Yes	All staff to receive and sign for an induction based on this risk assessment and the WSI.	Fieldwork Director (i.e. Project Officer or Supervisor)	Low
Lack of understanding of the site and its hazards	Personal injury	Medium	Yes	Weekly Health and Safety briefings, including a toolbox talk, will be delivered by the Project Manager or their nominated representative (normally the Project Officer or Supervisor) and attended by all site staff, including sub-contractors. A record of attendance will be maintained using the form provided in the Site Safety Procedures Manual.	Project Manager	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
Work-related Stress	Mental and Physical Ill-health	High	Yes	Please refer to the Oxford Archaeology Stress Risk Assessment (https://files.oxfordarchaeology.com/nextcloud/index.php/f/718695) when undertaking the Risk Assessment for this project or activity. Please consult one of the Regional H and S Advisors, or an OA Mental Health First Aider, for more advice or support. Common causes of work-related stress can include long working days, working away from home for prolonged periods and particularly complex or repetitive tasks. Covid 19 Specific Measure: Mental health of site team: Uncertainty generated by the situation can cause increased stress and anxiety, particularly over periods of 2 weeks or more. Follow controls for Work-related Stress. Take particular note of any team member who has a change in their outlook, personality or general demeanour. If you are concerned, speak to an OA Mental Health First Aider.	Project Manager	Low
Vehicle movement	Personal injury	Medium	Yes	Authorized, assessed drivers only to drive OA vehicles (owned or hired). Banksman must be present for all reversing of vans, minibuses or any vehicle with restricted rear view. PPE: Hi-vis vests	Fieldwork Director	Low
Vehicle security	Unauthorised use of vehicles/ vandalism	Low	Yes	Contractor to immobilise plant. Park in designated areas. Tools to be kept in locked OA vehicle.	Fieldwork Director/ Driver	Low
Driving to and from site	Road traffic accident	High	Yes	All drivers, either of OA or of hired vehicles, must be qualified and competent to drive. Each driver must have their licence checked by the Assistant to the Head of Fieldwork (at OAS), or regional equivalent. Each driver must have their driving ability assessed. Each driver must have a copy of the driver's Code of Conduct, which details their rights and responsibilities as a driver. On long journeys it is	Project Manager/ Supervisor	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				particularly important that drivers take breaks, or that driving is shared by more than one driver. The Project Manager is responsible for the safety of the site team once they have left the office (either Oxford, Cambridge or Lancaster), although this does not affect the legal responsibilities that drivers assume each time they drive for OA - see 'Drivers Risk Assessment'		
Driving on site	Injury to staff and members of the public	Medium	Yes	All vehicle movements around sites should be subject to a 15 mph speed limit, and should take account of footpaths and access routes. Please refer to the **Traffic Management Plan**, in the Method Statement above. Reversing of vans and all vehicles with restricted rear view must only be undertaken with the assistance of a banksman Wheels should be checked for excess mud before driving on the public highway.	Fieldwork Director/Drivers	Low
Safe storage of equipment in vehicles and good housekeeping	Personal injury, traffic accident	Medium	Yes	Before driving, check to ensure that all tools, equipment, materials, files, and possessions are stored safely. Nothing should be able to move or break free and interfere with the operation of the vehicle. Vehicle interiors should be kept as clean as possible; mud and dust should not be allowed to build up and any litter tidied up. Tools and heavy equipment should be stored separately from passengers, segregated by e.g. a fixed bulkhead. Particular care should be taken when transporting fuel, other flammable liquids or aerosols. Fuels should not be transported in the vehicle cab and should be transported in accordance with the law and in appropriate containers (i.e. plastic	Fieldwork Director/Drivers/ Passengers	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				jerry cans <10l and metal jerry cans <20l; max. 40l). Aerosols (such as spray paint) should not be transported in the cab and should be stowed safely, so that they cannot roll around or be pierced or damaged. The vehicle first aid kit, should be regularly checked and restocked and should be visible, readily available and always stored in the same place.		
Equipment in general	Personal injury	Medium	Yes	No OA staff to use equipment not owned or hired by OA.	Fieldwork Director	Low
Fire	Personal injury	Medium	Yes	All site facilities to be kept tidy and waste to be removed from site regularly. Electrical equipment to be PAT tested and regularly inspected. Fire extinguishers (water and CO^2) to be provided. Staff will be briefed on the risks of fire using the OA Fire Tool-Box Talk.	Fieldwork Director	Low
Damaged/ defective equipment	Personal injury	Medium	Yes	Daily inspection of equipment. Replace defective equipment where necessary, and ensure that Logistics Dept. are aware that defective equipment has been returned.	Fieldwork Director	Low
Slips, trips and falls	Personal injury	Medium	Yes	All access and egress routes to be clearly defined and kept as dry and free from mud as practicable (daily inspections must be undertaken to ensure this). Tools and other equipment to be kept tidy and away from defined access routes. Only manageable loads to be carried. Edge protection to be installed as necessary.	Fieldwork Director	Low
Falls or falling objects	Personal injury	High	Yes	Fencing will be used to protect any edge in excess of 1m high. Visible barrier fencing (Netlon) may be suitable for protecting edges in areas away from working areas or access routes, although the depth of the excavation will be a consideration. Excavation edges will be kept clear of materials or object to minimise the risk of materials falling into the excavations.	Fieldwork Director	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
Unauthorised access	Injury to members of the public	Medium	Yes	Where necessary Perimeter fencing may be required (in some cases HERAS type). Alternatively, signage and fencing (Netlon or HERAS) around locally deeper trenches will be necessary.	Fieldwork Director	Low
Mechanical excavator	Personal injury	High	Yes	Authorised and competent driver. Driver's ability/attitude regarding safe working should be monitored, and action taken if necessary. Competent OA excavation marshal (machine watcher) to be used for mechanical excavation on site. Plant marshal to be used for plant movements around site Minimum marshal PPE: hard hat, hi-vis vest, safety boots. DRIVER'S CPCS OR NPORS CARD NEEDS TO BE CHECKED AND PHOTOGRAPHED BEFORE WORK COMMENCES: Ensure card is the right one for the machine being used and has not expired – refer to OA Safety Advisors if you are in doubt. In both cases the card should be blue (not red, which is a trainee card) and should have a CSCS logo on it. For evaluations, plant movements around site and between trenches must be supervised by a plant marshal at all times. For excavations, plant movements may not require supervision by a plant marshal where access routes have been established and these are segregated from pedestrian routes.	Fieldwork Director	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				All plant movements in and around higher risk areas, including but not limited to overhead cable crossing points, service exclusion zones and public footpaths, or where properly segregated access routes have not been established, must be supervised by a plant marshal at all times. NB supervision requires the plant marshal to escort the plant on foot or in a vehicle. Except as defined below, never enter the working arc of the machine. Working under a machine bucket is a common cause of accidents, many of them fatal. If the excavation marshal wishes to investigate possible archaeology, to speak to the driver, or approach the machine for any reason, she/he must give the signal to stop (one or two hands raised, palm(s) towards the driver) and then signal that she/he is going to approach (one hand placed on chest, then point where you are going). Make sure the signals have been understood, and only approach when the driver has moved the excavator arm to one side and rested the bucket on the ground.		
Quick Hitch mechanism on mechanical excavator	Crush or strike injury if bucket becomes detached	High	Yes	A quick hitch (QH) is the system that allows the driver to quickly change between buckets/breaker or other equipment. To be legal the QH must have a locking pin, whether this is locked automatically from the cab, or manually by the driver getting out of the cab to put a pin in place. To be safe, the locking pin must always be used and the driver must know how to operate it.	Banksman / signaller	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				Before starting, ask the driver to confirm which of these systems is in place, and to confirm that the system will be used. Only proceed if the driver clearly states which type he will be using. If you are present when the bucket is being changed on a manual type, watch that the pin is put in place.		
Working in deep excavations	Trench collapse, falling objects, falling into trench. Personal injury.	High	Yes	Deep excavations can be considered as any excavation which creates the potential for a significant fall or collapse of material. This can apply to excavations as shallow as 0.5 m deep. An assessment of the stability of soils for all excavations >500 mm deep MUST be made, and recorded in the additional rows below. If in doubt, do not enter, or step/batter/shore. Edge protection, to prevent falls, must also be installed. Deep excavations may require a Method Statement (MS) to accompany the detailed Risk Assessment (to be added above) - detailed guidance is available from the OA H and S Advisors. Deep excavations may also constitute Confined Spaces - this issue must be addressed in the detailed MS.	Project Manager	Low
Underground Services	Risk of electrocution, explosion or flooding.	Medium	Yes	Undertake Services check through statutory bodies/clients drawings wherever possible. Perimeter of site (walls, hedgelines etc.) to be checked for markers indicating buried services prior to CAT scanning and excavation. Competent person (defined by the HSE as someone who has received, as a minimum, training from a qualified operative) to check for unknown underground services prior to machining using a Cable Avoidance Tool ("CAT and Genny"). Hand excavate in areas of suspected live services to locate and isolate from interference from mechanical excavation. Notify statutory bodies/clients if suspected live services are found. ALWAYS ASSUME THAT ALL SERVICES ARE LIVE.	Fieldwork Director	Low
Overhead cables	Risk of electrocution	High	Yes	Undertake Services check through statutory bodies/clients drawings wherever possible. Visual inspection of entire site prior to any work starting. If overhead	Project Manager/	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				cables present, specific risk assessment to be undertaken and entered in section below: as a minimum, the electricity provider for the region must be consulted for all plant movements under or work near cables, and their advice followed; a safe working distance of 15 m is usually recommended. All personnel to be briefed, especially with regard to use of surveying staff and erection of any towers. There are known overhead power lines extending through the site. Goal posts are to be erected at specific crossing points.	Fieldwork Director	
Weather	Cold/ wet weather: hypothermia/ Ice Hot weather: heatstroke/ dehydration Electrocution	Low	Yes	Re-arrange fieldwork if practicable. Staff will be issued with suitable clothing and footwear. Additional breaks to be taken in the event of very hot weather. Work on site to be suspended in the event of prolonged heavy rain, or when site becomes too slippery to be safely worked. Weather forecasts should be monitored and precautions taken in the event of predictions of dangerous weather e.g. high winds - shelter in a cabin or vehicle; electrical storms – do not use survey equipment or polecams, i.e. anything that could increase the chance of a lightning strike. If necessary, shelter in a vehicle.	Project Manager	Low
Soil or groundwater contamination	Ingestion/contact with contaminated soils or groundwater, leading to ill-health	Medium	No	Any previous site investigations should be consulted for evidence of soil or groundwater contamination prior to excavation starting. Should evidence of contamination be found (by odour or appearance) excavation to cease and suitable advice to be sought. If contaminants are known or suspected prior to work starting, or discovered during site work, specific COSHH assessment must be undertaken and included in the 'Additional Risk Assessment' section (below). Relevant departments should be notified of the risk (logistics, environmental, finds, archives depts). All material (e.g.	Fieldwork Director/ Project Manager	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				finds, records and equipment) returning from contaminated sites should be as clean as possible in order to minimise the risk of contaminants being bought back to the office or stores. Finds labels indicating possible or known contamination (white with yellow dots – available from OA stores) should be used, marked in red ink rather than the usual black. Where no contamination is known best practice is to treat as suspected anyway, by adopting a good hygiene regime. Wash face and hands (hot water and soap) before each break and at end of day. No smoking or eating on site except in designated areas. There is no known ground contamination. However, staff will remain vigilant to its presence.		
Asbestos	Asbestosis, plueral damage and lung cancer/mesothelioma	Medium	No	Asbestos is a naturally occurring mineral that can be found in a very diverse range of materials (asbestos containing materials or ACMs) utilised prior to 2000; most commonly between the 1950s and 1980s. It cannot be definitively identified visibly through fabric, texture or colour. The risk will be higher if working on a brownfield site, in an area containing building debris or within buildings constructed or refurbished before 2000. Sites with made ground and/or with evidence of dumping episodes may also contain building debris comprising ACMs. Risk will be lower in areas of rural landscape. The risk to health is through inhalation of asbestos fibres. Prior to the commencement of a project the ground investigation report should be reviewed for any evidence or risk of asbestos, and its recommendations followed. Additional risk assessment should be undertaken using that report, and recorded below. In the absence of such a report: if any suspect material is encountered immediately report to the OA Project Manager before proceeding with any work. <u>As a general precaution, if working in dry conditions on urban or brownfield sites, masks (FFP3 type) should be worn during machine excavation.</u>	Fieldwork director/staff	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				Removal of any ACMs should be undertaken by suitably qualified professionals only. There is no known asbestos contamination present on the site, however, staff will remain vigilant.		
Livestock	Personal injury, or injury to livestock	Medium	No	Prior to starting on site the Project Manager should establish that no fields are to have any work undertaken within them where there is a risk that livestock will be present. Cattle in particular can be very inquisitive and injuries to personnel are not uncommon. Livestock can also be injured by falling into open trenches.	Project Manager	Low
Zoonotic hazards, e.g. Psittacosis, Leptospirosis (Weil's Disease), Tetanus	Contraction of serious disease	Medium	Yes	Induction. Issue information cards. High standard of hygiene (controls as for contaminated ground).	Fieldwork Director	Low
Noise	Hearing damage; tinnitus	Medium	Yes	Hearing protection in the form of ear plugs, or preferably ear defenders compatible with hard hats, must be available for sites where noise is likely to be a hazard. As a general rule of thumb, if you are having to raise your voice to make yourself heard by someone less than 2 m away, the noise level is likely to be higher than 80 decibels. At this level it is advisable although not compulsory to wear ear defenders or ear plugs. This advice must be passed on to all staff by the person responsible for monitoring sound levels (usually the Supervisor or Project Officer). If you have to shout to be heard, the level is likely to be in excess of 85dB. At this level the wearing of ear defenders or plugs is mandatory, and must be enforced by the Supervisor or Project Officer.	Fieldwork Director	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				Hearing protection zones must be established on sites where noise is a problem, and appropriate PPE worn within them. In most case this zone will be the area around a working mechanical excavator		
Use of portable music devices and mobile phones	Impaired hearing and alertness leading to accidents	Medium	Yes	The use of a portable music device (MP3 player, mobile phone etc.) will impair a worker's ability to hear surrounding sounds and compromise the user's general alertness and concentration. This is especially hazardous if the user is working around moving equipment or in circumstances where a worker must be able to hear warning sounds. The use of portable music devices is therefore banned on all OA sites. Using a mobile phone will also compromise the user's alertness and so all calls must be made in a safe place, away from site operations, usually the site office or welfare facility.	Fieldwork Director/ all staff	Low
Sharp objects	Injury or disease	Medium	Yes	Great care to be taken when clearing areas, moving rubbish etc where there is the potential for presence of needles/any materials associated with drug use. If found, to be left in place, area cordoned off and advice sought from Local Authority Environmental Health Officer (EHO). As a last resort, needle may be moved by person wearing gloves and using a shovel. Place in a bucket and cover with a layer of soil. Report to EHO.	Fieldwork Director/ all staff	Low
Unexploded ordnance	Explosion	High	No	All new sites will be evaluated for the risk of there being unexploded ordnance present. Consideration should be given to a site's past use, preferably at desk-based assessment stage but certainly prior to mobilisation to site. The site specific risk assessment will identify sites located in areas where ordnance was produced, or sites which may have been a target for wartime bombing raids. Where sites are	Project Manager	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				identified as having the risk of unexploded ordnance the risk assessment will define a specific procedure for dealing with 'suspicious objects'. This procedure will be bought to the attention of everyone on site by means of induction and prominently displayed information sheets.		
Manual handling	Risk of strain injuries from incorrect or excessive manual handling	Medium	Yes	A considerable amount of manual handling will be involved in the archaeological work. This will include loading and unloading equipment, lifting wheelbarrows and buckets, shovelling, lifting soil samples. Consideration must always be given to whether the load in question can be lifted by other means, e.g. the mechanical excavator can be used for large quantities of spoil unless archaeological circumstances dictate otherwise. Members of the excavation team will not be asked to lift loads beyond their capabilities. Manual lifting will be carried out carefully, and in a manner calculated not to cause injury to the lifter. In general, for the type of loads predicted, this means a lift carried out with the load close to the body. The back of the lifter should be kept upright so that the legs rather than the back provide the lifting force. Staff will be rotated so that they do not perform very repetitive tasks (eg hand cleaning with trowels) for very long periods. Buckets will be filled to take account of the abilities of the user, and the distance/gradient to be travelled. Shovels and spades will be used from a firm, stable standing position which uses the legs rather than the back to lift the weight. The surrounding area is to be free of obstructions and other personnel. When using a pick or mattock, the user's feet must be placed apart to obtain a firm footing, and the pick wielded so that the point of contact is within easy reach, but	Fieldwork Director	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
				not too close to the feet. The surrounding area, including overhead, is to be free of obstructions and other personnel. Care is required when carrying trowels, and when putting high manual pressure on the trowel when pulling towards the body. In the latter situation the trowel may slip or jump against the user. Wheelbarrows will be loaded only to the lifting and pushing capabilities of the pusher, taking account of the weight and bulk of the material, and of the route to be travelled. Plank runs will be installed if the ground conditions require them, and will be kept clean and as dry as is practicable. Where the run goes uphill, planks with treads will be installed on either side of the central plank.		
Lone working	Operatives may be untended for a significant period of time if they become suddenly unwell or have an accident	High	Yes	Loneworking situations can develop at any point, either as a result of deployment of single operatives to sites, or where members of teams become isolated from the main team. Some issues to consider: Sickness – people with some health problems may be unsuitable choices for lone working. Choose accordingly. Accidents – it is axiomatic that all risks will have been assessed for the area of work, and mitigation measures put in place, but it must be remembered that accidents, particularly slips and falls, can occur in the safest environments, so concentrate on length of time untended, and good communication. Length of time untended – supervisor to visit regularly (matter of good practice, not just for safety reasons) – no-one to be left uncontacted for longer than the time between one break and the next. Communication – should have mobile phone and relevant numbers Training – must be called in to attend safety briefings. Emergencies – e.g. if site to be evacuated, what are arrangements for informing lone worker.	Project Manager	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
Allergenic substances esp. Latex	Severe Allergic reaction	High	Yes	No latex containing products (e.g. protective gloves) to be purchased by OA or used on any OA site. Individuals with severe allergies must notify the Project Officer/Supervisor during induction and explain any relevant treatments that they might carry e.g. an epi-pen.	Project Manager/Supervisor/OA Staff	Low
Harassment	Stress, personal injury	Medium	Yes	No harassment or bullying of any type (be it physical, verbal, sexual, racial etc) will be tolerated on any OA project – please refer to our Dignity at Work Policy. Should any member of staff encounter bullying or harassment or feel threatened by the actions of another (within or external to OA), they *must* report it to the Site PO/Supervisor who in turn will report it to the appropriate authority and make a record of the harassment and any actions taken. If harassment persists, OA staff will remove themselves from the site. Please refer to the Oxford Archaeology Stress Risk Assessment for further guidance	Project Manager/Supervisor/OA Staff	Low
Spillage of fuel	Contamination /pollution of environment	Medium	Yes	Spill kits will be issued to all sites where re-fuelling of plant or equipment is required. All spillages will be reported as soon as practicable. Please refer to the Tool Box Talk: Action in case of Welfare Unit/Portable Toilet Waste Container, Fuel (Diesel) or Motor Oil Spillage on Site.	Project Officer/Supervisor	Low
Dust	Dust contamination, both windborne and as silt	Medium	Yes	Movement of construction traffic around the area to be kept to a minimum. Daily assessment will be made of the dust conditions , and if required the dust will be dampened down with water.	Project Officer/Supervisor	Low
Waste	Litter, attracting wildlife, insects etc.	Medium	Yes	Anticipated waste sources are litter and plastic from site welfare facilities	Project Officer/Supervisor	Low

1 HAZARD	2 RISK	3 RISK RATING (High, Medium or Low)	4 Applies to this project? (Yes/No)	5 CONTROLS	6 ACTION BY?	7 RESIDUAL RISK RATING (High, Medium, Low or Insignificant)
	Bio-hazards such as salmonella, pollutant run-off into drains, contamination of soils and watercourses.			All waste generated on site will be disposed of in a responsible manner in accordance with Site Rules and Procedures which will be displayed in the welfare cabin. All materials produced as a by-product of the works will be managed in accordance with the OA Tool Box Talk on Waste Management. Waste management and minimisation will be included in the site inductions and work practice.		
Discharge of ground or flood water to active watercourse	Contamination of the water-course, water table and the surrounding area	Medium	Yes	There will be no intentional disturbance of groundwater during the course of the works. All machine work will be intensively monitored. All staff will be inducted on the risk If trenches become flooded. No pumping will be allowed until a permit to pump is put in place Pumping will ideally be onto undisturbed ground where it can percolate through the natural vegetation. It may be required to pump the water into a bowser to settle before discharge.	Project Officer/Supervisor	Low
Dust/water run-off from contaminated spoil	Contamination /pollution of environment	Medium	Yes	If the spoil generated during OA excavation is known or suspected to contain contaminants, measures should be taken to minimise dust or water run-off from the spoilheap. These include: sheeting or damping down; good maintenance of the spoil heaps.	Project Officer/Supervisor	Low

The following table is for the assessment of <u>Additional Risks</u> during the course of the works or when arriving at the site for the first time. It is imperative that a constant review and assessment of the risks is undertaken, and the findings/required actions are recorded below.
Some risks will only become apparent once you are on site.

HAZARD	RISK	RISK RATING (High Medium Low)	CONTROLS, and DATE RISK IDENTIFIED	ACTION BY?	RESIDUAL RISK RATING (High Medium Low Insignificant)	TOOL BOX TALK GIVEN?

COVID-19 Measures – addendum to the OA RAMS Template

Updated 2nd September 2020

Overriding Principles

The 2m rule (where reasonably practicable – see below), and personal, tools, equipment and vehicle hygiene requirements and work practices, as outlined below, are the key measures required to keep everyone as safe as possible. In addition to OA's duty of care, each individual employee has a legal duty under H and S legislation to observe these rules. Please let your Supervisor/Project Officer/Project Manager know immediately if any circumstances arise while you are at work that make it impossible to follow these rules, and please do not continue with your work if this happens. In line with established OA policy, no one will be penalised if they have reasonable justification for refusing to carry on working in situations where OA's defined safe systems are not being implemented properly.

Since the 4th July 2020, the Government's social distancing rules have been relaxed in certain circumstances, although the guidance stipulates that mitigation measures must be in place to allow this. Guidance issued by Prospect Head Office to Archaeologists Branch Members on the 3rd July stated that '*the 1m+ relaxation may be required in some specific circumstances e.g. for those returning to work on site who do not drive. Any activity associated with work that reduces the 2m distancing guidance must be risk assessed.*'

This document has been revised to show where the 2m rule has been replaced with the 1m+ rule, in keeping with this new guidance, and the basis for the change and the mitigation measures required.

Social distancing

Vehicles

As far as reasonably practicable, staff will still travel to and around sites in vehicles which allow 2m distancing. However, where this is not practicable, vehicles will be measured to assess how many people can travel in them while observing the 1m+ rule. Mitigation measures to allow for the reduction from 2m to 1m+ will include:

- The wearing of face masks (until further notice these will be type IIR surgical masks, to be provided by OA) by all occupants of the vehicles at all times
- Good ventilation whenever the weather and design of the vehicle allows for it
- Consideration of the risks to vulnerable individuals i.e. those with medical conditions that make them more susceptible to the effects of COVID-19
- Training of staff to ensure that occupants face away from each other during the journey
- Continued high standards of hygiene
- Controlled access to and egress from vehicles
- Vehicles to be shared by the same individuals whenever possible
- Staff will always sit in the same seats if possible, to minimise the number of people who may be in 'close contact' with an individual who becomes ill with COVID-19

These rules may be relaxed when people from the same household e.g. couples or housemates are travelling together. Personal vehicles will be used as necessary and drivers reimbursed as per the OA driving expenses policy.

Staff will travel independently where possible, transport can be shared if staff are from the same household. The Project Officer will travel in the unit L200 pickup, whilst the remaining staff will travel independently, or share, in their own vehicles

COVID-19 specific RAMS will be updated **here** to detail situations where the 1m+ rule is to be adopted in vehicles.

See the approved Windy Harbour COVID-19 RAMS for the agreed approach to travel in coaches using the 1m+ rule, and adapt for your site as necessary.

The 1m+ rule can be applied for short journeys in other vehicles e.g. Hi-Luxes, crew and mess vans, as long as the journey time is no more than 30 minutes, and the following measures are observed:

- Masks will be worn at all times
- The vehicle is well ventilated (weather permitting)
- Good standards of hygiene are maintained

The vehicles must be measured (usually from back of headrest to back of headrest) to demonstrate that a distance of 1m+ can be maintained.

Cabins/welfare/site offices

The 2m principal will be applied at all times. Cabins will be measured to allow a calculation of the number of people who can be present at any one time and all staff will be made aware of this. If necessary, additional welfare cabins will be provided or vehicles will be used to provide extra capacity to keep people separated at breaktimes.

Where site facilities are being provide by the Client/Principal Contractor, and/or being shared with other contractors, the OA PM will ensure that these measures can be achieved, and that social distancing and hygiene is being rigorously enforced at all times. OA staff will not be required to work on sites where this cannot be consistently achieved.

On sites where the capacity of the welfare facilities is insufficient to accommodate all staff at once - even with staggered breaks - whilst still maintaining social distancing, staff may be required to take breaks in vehicles instead.

Where this is necessary, consideration should be given to the issues caused by poor weather, specifically wet PPE. It may be necessary to consider additional drying facilities in these circumstances. If this is not possible, other measures may be required such as the provision of a second set of waterproofs i.e. jacket and trousers to allow a change during the day. Wherever possible existing stock of cleaned secondhand PPE will be used but new sets will be purchased if needed.

A single 25 foot welfare cabin, comprising an office, mess facility and toilets has been provided. The plant operators will only use the welfare facilities for toilet and handwashing. Only the Project Officer will use the office. The mess facilities will be measured to ascertain the maximum capacity upon delivery. Where possible staff will take their breaks within their personal vehicles.

Site visitors

Any site visitors (i.e. client, consultant, toilet cleaner, fuel deliverers), will be instructed by the Project Manager to phone the OA Supervisor ahead of time to arrange a visit. All visitors will be inducted from a safe distance with special emphasis on the COVID-19 Measures.

Deployment

Movement of staff between site will be limited as far as practicable, and staff will be deployed as near to home as practicable.

Overnight Accommodation

Project Managers (or others e.g. Michelle Watson in Lancaster) will check cleaning arrangements for B and Bs etc., and if these are not sufficient we will move people to alternative accommodation.

Bed and breakfast accommodation will be provided in the vicinity of the site. The accommodation will include for a single room and an ensuite bathroom. If shared facilities are included with the accommodation, i.e. a kitchen area or tv room, these will not be used.

Personal hygiene and sharing of equipment

Hand washing will be enforced through supervision, and the 20 second rule will be observed. Hands must be washed before entering an OA vehicle, after arriving on site, before entering the welfare cabin(s) – whether at break time or not – and after using the toilet.

Sufficient stocks of soap, water, handtowels and cleaning products will be maintained; moisturiser will also be provided.

All staff will have their own cups/cutlery/crockery and will take them home to wash at the end of each day. All tea, coffee, water, milk etc containers will be included in the cleaning regime.

As far as practicable, food and drink (other than the water, milk, tea and coffee provided) should be brought from home to avoid the need to visit shops during the working day. There must be no sharing of food or drinks, and drinks must not be made for others. If possible, arrangements should be made so that the kettle should only be poured by one person to avoid potential contamination of the handle by multiple users – while at the same time maintaining social distancing.

Equipment such as tools, pens, pencils, clipboards and PPE to be allocated to each staff member and not shared. Labelling may be necessary.

Shared equipment such as cameras, survey kit, CAT and genny, metal detectors etc, will be cleaned after each use or allocated to only one member of the site team and shared as little as possible. A rota may be required to achieve this.

The GPS will only be used by a nominated member of staff, similarly the CAT and Genny will only be used by a nominated member of staff, unless the equipment is thoroughly wiped down prior to hand over to another member of staff. The camera equipment will be shared by all members, however, this equipment will be wiped down prior to hand over to another member of staff. If possible, the Project Officer could nominate a member of staff to use the camera quipment.

Ideally only one person per site will be responsible for dealing with paper archives where sharing is normally necessary, such as taking out numbers from registers. Folders should be cleaned regularly. Wherever possible, digital recording systems should be used.

Mobile phones are not to be shared, and laptop/tablets to be cleaned before use, if sharing is required.

Additional time to prepare and pack-up from work will be allowed for limits on use of wash and drying room facilities.

Cleaning

Cabins/welfare/site offices/vehicles will all be cleaned first thing in the morning and before each break. A rota will be drawn up and prominently displayed and communicated to the site team.

Hired vehicles will have been deep cleaned before being delivered to OA for the first time.

Surfaces, door handles, light switches, kettles, microwave buttons/handles all need to be included in this cleaning regime.

Emergency Procedures

A Type IIR surgical face mask for emergency 1st Aid use only must be present on site before work commences, and the First Aiders briefed on its use (advice will be given remotely by one of OA's trained staff) and on the measures to be taken if colleagues develop symptoms on site. PO/Supervisors will take advice from an OA H and S advisor before trying to take symptomatic colleagues' home.

See method statement in main RAMS document.

Mental Health

OA's approach to Mental Health and Stress Management will apply and individuals who are having difficulties should ask for help and guidance, in line with our Stress Management Policy, as required. The Policy is here: https://files.oxfordarchaeology.com/nextcloud/index.php/f/178125

See Risk Assessment in main RAMS document.

Cover arrangements

Consideration will be given to the need for staff cover in the event that a key person on site (PO/Supervisor/Surveyor) develops symptoms – deputies will be nominated as far as practicable, and will be consulted and briefed in advance to ensure that they are happy to accept additional responsibilities.

The OA Site Supervisor will be in touch with the Project Manager a minimum of twice a day to ensure that their health can be monitored.

People Vehicle Plant Interface

DO YOU KNOW YOUR SAFE ZONES?

360 Tracked Excavator

Plant Interface Zones

Yellow Zone
The Excavator Banksman (EB) or Machine Controller (MC) must remain within this zone to be able to direct the plant operator. All personnel approaching operating plant must do so from this zone to gain visual contact with the plant operator and authorisation from the EB or MC before entering Plant Interface Zones.

Amber Zone
Entry prohibited until positive visual contact is confirmed by the plant operator (e.g. thumbs up), authorisation from the EB / MC, the dipper arm / hydraulics are grounded, the machine is immobilised using the safety lever and the engine is switched off.

Where work in the amber zone is unavoidable a robust, task specific, safe system of work must be produced which minimises the time spent within the zone and includes detailed controls for communication between the machine operator and the EB / MC.

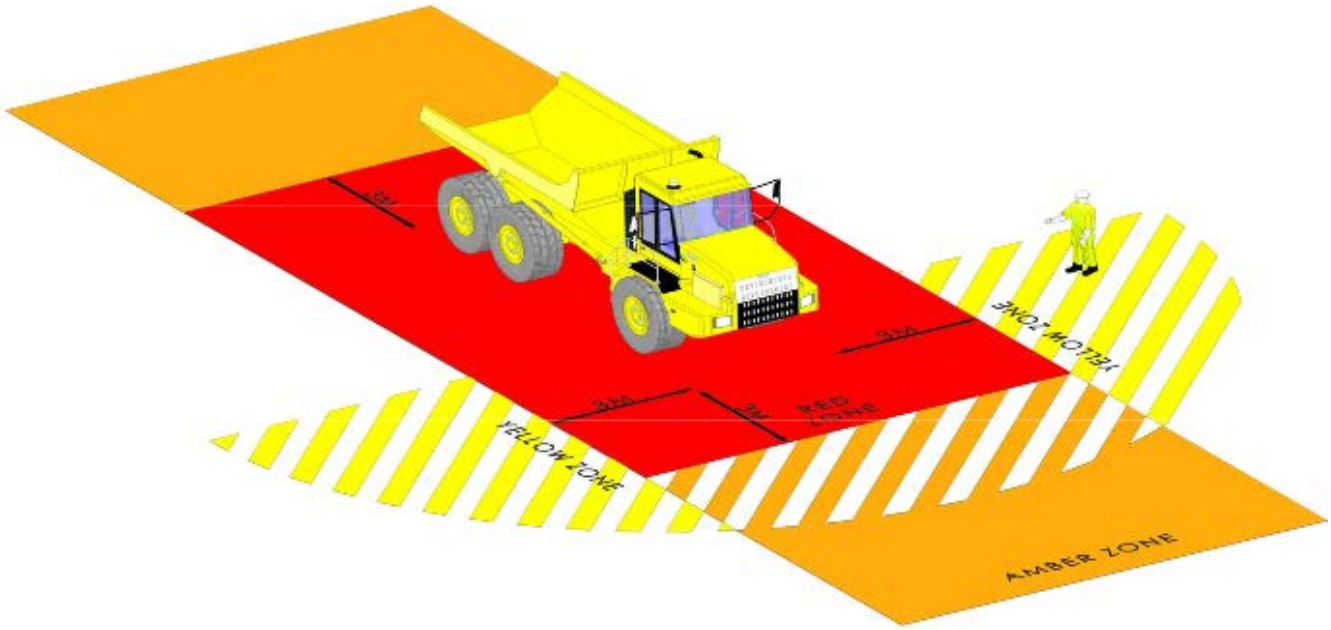
Red Zone
Entry prohibited unless the machine is completely isolated, the engine is switched off and a specific safe system of work is in place that prevents the machine being operated either inadvertently or deliberately.

Hatched Zone
Denotes typical sight lines of the plant operator

People Vehicle Plant Interface

DO YOU KNOW YOUR SAFE ZONES?

Articulated/Rigid Dump Truck



Plant Interface Zones

Yellow Zone
All personnel approaching operating plant must do so from this zone to gain visual contact with the plant operator.

Amber Zone
Entry prohibited until positive visual contact is confirmed by the plant operator (e.g. thumbs up), the dipper arm / hydraulics are grounded, the machine is immobilised and the engine is switched off.

Red Zone
Entry prohibited unless the machine is completely isolated, the engine is switched off and a specific safe system of work is in place that prevents the machine being operated either inadvertently or deliberately.

Hatched Zone
Denotes typical sight lines of the plant operator

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APPENDIX B TRENCH DESCRIPTIONS AND CONTEXT INVENTORY

Trench 1						
General description					**Orientation**	E-W
Trench contained a pit located approximately 4.7m away from its western end. Trench contains topsoil and subsoil which overlies a clay natural. The subsoil is different at the eastern end of the trench in comparison to the subsoil at the western end.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.69
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
100	Layer	-	0.25	Topsoil	-	-
101	Layer	-	0.35	Subsoil	-	-
102	Layer	-	-	Natural	-	-
103	Cut	0.45	0.15	Cut of pit	-	-
104	Fill	0.45	0.15	Fill of Pit ***103***	-	-

Trench 2						
General description					**Orientation**	E-W
Trench contained topsoil and subsoil which overlies a clay natural. No archaeology was present in this trench, though natural coal deposits were able to be identified.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.62
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
200	Layer	-	0.32	Topsoil	-	-
201	Layer	-	0.18	Subsoil	-	-
202	Layer	-	-	Natural	-	-
203	Cut	0.85	0.25	Cut of natural feature	-	-
204	Fill	0.85	0.15	Fill of Natural Feature ***203***. Mid greyish orange silty clay above natural coal deposit ***205***	-	-
205	Fill	0.23	0.1	Fill of Natural Feature ***203***. Dark blueish black deposit of coal	-	-

Trench 3						
General description					**Orientation**	E-W
No archaeology present in this trench. Topsoil directly overlies the clay natural, with no evidence of subsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.42
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
300	Layer	-	0.29	Topsoil	-	-
301	Layer	-	-	Natural	-	-

Trench 4						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil overlies subsoil which, in turn, overlies clay natural					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.66
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
400	Layer	-	0.26	Topsoil	-	-
401	Layer	-	0.25	Subsoil	-	-
402	Layer	-	-	Natural	-	-

Trench 5						
General description					**Orientation**	NE-SW
Trench contains a curvilinear ditch, truncated by a modern land drain, at its southwestern end. The natural in this trench varies throughout and is overlain by the subsoil and topsoil.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.59
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
500	Layer	-	0.12	Topsoil	-	-
501	Layer	-	0.23	Subsoil	-	-
502	Layer	-	-	Natural	-	-
503	Cut	0.56	0.15	Ditch	-	-
504	Fill	0.56	0.15	Fill of Ditch ***503***	-	-

Trench 6						
General description					**Orientation**	N-S
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
600	Layer	-	0.1	Topsoil	-	-
601	Layer	-	0.21	Subsoil	-	-
602	Layer	-	-	Natural	-	-

Trench 7						
General description					**Orientation**	N-S
Fire pit present approximately 2.7m away from the southern end of the trench. The topsoil and subsoil of this trench overlie a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.57
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
700	Layer	-	0.37	Topsoil	-	-
701	Layer	-	0.12	Subsoil	-	-
702	Layer	-	-	Natural	-	-
703	Cut	1.2	0.13	Pit	-	-
704	Fill	1.2	0.04	Fill of Pit ***703***	-	-
705	Fill	0.48	0.04	Fill of Pit ***703***	-	-

706	Fill	1.2	0.05	Fill of Pit ***703***	-	-

Trench 8						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
800	Layer	-	0.12	Topsoil	-	-
801	Layer	-	0.21	Subsoil	-	-
802	Layer	-	-	Natural	-	-

Trench 9						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.56
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
900	Layer	-	0.35	Topsoil	-	-
901	Layer	-	0.16	Subsoil	-	-
902	Layer	-	-	Natural	-	-

Trench 10						
General description					**Orientation**	E-W
A ditch is present at the western end of the trench. The topsoil and subsoil overlie a clay natural which varies in colour throughout the trench.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.41
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1000	Layer	-	0.19	Topsoil	-	-
1001	Layer	-	0.11	Subsoil	-	-
1002	Layer	-	-	Natural	-	-
1003	Cut	1.12	0.43	Ditch	-	-
1004	Fill	1.12	0.43	Fill of Ditch ***1003***	-	-

Trench 11						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.38
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1100	Layer	-	0.23	Topsoil	-	-
1101	Layer	-	0.13	Subsoil	-	-
1102	Layer	-	-	Natural	-	-

Trench 12						
General description					**Orientation**	E-W
Two shallow ditches present at western end of the trench. Topsoil and subsoil overlie a clay natural which also contains two natural coal deposits.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1200	Layer	-	0.35	Topsoil	-	-
1201	Layer	-	0.17	Subsoil	-	-
1202	Layer	-	-	Natural	-	-
1203	Cut	0.65	0.04	Ditch	-	-
1204	Fill	0.65	0.04	Fill of Ditch ***1203***	-	-
1205	Cut	0.45	0.09	Ditch	-	-
1206	Fill	0.45	0.09	Fill of Ditch ***1205***	-	-

Trench 13						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.6
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1300	Layer	-	0.33	Topsoil	-	-
1301	Layer	-	0.15	Subsoil	-	-
1302	Layer	-	-	Natural	-	-

Trench 14						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.47
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1400	Layer	-	0.2	Topsoil	-	-
1401	Layer	-	0.16	Subsoil	-	-
1402	Layer	-	-	Natural	-	-

Trench 15						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.43
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1500	Layer	-	0.17	Topsoil	-	-
1501	Layer	-	0.14	Subsoil	-	-
1502	Layer	-	-	Natural	-	-

Trench 16						
General description					**Orientation**	E-W
A tree throw is present at the western end of the trench whilst a linear is present at the eastern end, corresponding with the geophysics of this area.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.35
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1600	Layer	-	0.12	Topsoil	-	-
1601	Cut	0.45	0.07	Tree Throw	-	-
1602	Fill	0.45	0.07	Fill of Tree Throw ***1601***	-	-
1603	Layer	-	0.23	Subsoil	-	-
1604	Layer	-	-	Natural	-	-

Trench 17						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.67
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1700	Layer	-	0.23	Topsoil	-	-
1701	Layer	-	0.16	Subsoil	-	-
1702	Layer	-	-	Natural	-	-

Trench 18						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.38
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1800	Layer	-	0.14	Topsoil	-	-
1801	Layer	-	0.13	Subsoil	-	-
1802	Layer	-	-	Natural	-	-

Trench 19						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.49
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
1900	Layer	-	0.2	Topsoil	-	-
1901	Layer	-	0.14	Subsoil	-	-
1902	Layer	-	-	Natural	-	-

Trench 20						
General description					**Orientation**	NE-SW
Trench contains two ditches, one on either end of the trench. Topsoil and subsoil overlay a Colluvial layer which covers a natural clay.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.78
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2000	Layer	-	0.19	Topsoil	-	-
2001	Layer	-	0.13	Subsoil	-	-
2002	Layer	-	0.3	Colluvial layer	-	-
2003	Layer	-	-	Natural	-	-
2004	Cut	0.43	0.09	Ditch	-	-
2005	Fill	0.43	0.09	Fill of Ditch ***2004***	-	-
2006	Cut	0.94	0.12	Ditch	-	-
2007	Fill	0.94	0.12	Fill of Ditch ***2006***	-	-

Trench 21						
General description					**Orientation**	NEE-SWW
Linear ditch present approximately 2.6m from SWW end of trench. Three modern 'slots' filled with bitumen also present in trench. Topsoil and subsoil overlie a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2100	Layer	-	0.34	Topsoil	-	-
2101	Layer	-	0.16	Subsoil	-	-
2102	Layer	-	-	Natural	-	-
2103	Cut	0.75	0.27	Ditch	-	-
2104	Fill	0.75	0.27	Fill of Ditch ***2013***	-	-

Trench 22						
General description					**Orientation**	NWW-SEE
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2200	Layer	-	0.35	Topsoil	-	-
2201	Layer	-	0.15	Subsoil	-	-
2202	Layer	-	-	Natural	-	-

Trench 23						
General description					**Orientation**	NNW-SSE
A ditch cutting into a clay and sandstone natural is present in this trench.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.35
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2300	Layer	-	0.25	Topsoil	-	-
2301	Layer	-	0.1	Subsoil	-	-
2302	Cut	1.9	0.25	Ditch	-	-
2303	Fill	1.9	0.25	Fill of Ditch ***2302***	-	-
2304	Layer	-	-	Natural	-	-

Trench 24						
General description					**Orientation**	NW-SE
This trench contains two ditches which cut into a sandstone natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.35
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2400	Layer	-	0.25	Topsoil	-	-
2401	Layer	-	0.08	Subsoil	-	-
2402	Cut	0.6	0.28	Ditch	-	-
2403	Fill	0.6	0.28	Fill of Ditch ***2402***	-	-
2404	Cut	0.7	0.29	Ditch	-	-
2405	Fill	0.7	0.29	Fill of Ditch ***2404***	-	-
2406	Layer	-	-	Natural	-	-

Trench 25						
General description					**Orientation**	NW-SE
No archaeology present in this trench. Topsoil and subsoil overlie clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.53
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2500	Layer	-	0.25	Topsoil	-	-
2501	Layer	-	0.21	Subsoil	-	-
2502	Layer	-	-	Natural	-	-

Trench 26						
General description					**Orientation**	NE-SW
Trench has a single ditch running N-S l, located in the center of the ditch. Topsoil and subsoil overlay a natural clay.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.51
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2600	Layer	-	0.33	Topsoil	-	-
2601	Layer	-	0.18	Subsoil	-	-

2602	Fill	0.44	0.1	Slumping deposit within Ditch ***2604***	-	-
2603	Fill	1.32	0.1	Gradual build up within Ditch ***2604***	-	-
2604	Cut	2.1	0.66	Ditch	-	-
2605	Fill	1.4	0.19	Fill of Ditch ***2604***	-	-
2606	Fill	1.18	0.1	Gradual build up with Ditch ***2604***	-	-
2607	Fill	2.1	0.24	Gradual build up within Ditch ***2604***	-	-
2608	Layer	-	-	Natural	-	-

Trench 27						
General description					**Orientation**	E-W
No archaeology in this trench. Topsoil and Colluvial layer overlie a clay natural. Trench contains a paleochannel which was investigated.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.56
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2700	Layer	-	0.34	Topsoil	-	-
2701	Layer	-	0.2	Colluvial layer	-	-
2702	Layer	-	-	Natural	-	-

Trench 28						
General description					**Orientation**	E-W
No archaeology present in this trench. Has a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.38
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2800	Layer	-	0.38	Topsoil	-	-
2801	Layer	-	-	Natural	-	-

Trench 29						
General description					**Orientation**	N-S
No archaeology present in this trench. Topsoil overlies a clay natural. (No subsoil)					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.25
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
2900	Layer	-	0.25	Topsoil	-	-
2901	Layer	-	-	Natural	-	-

Trench 30						
General description					**Orientation**	N-S
No archaeology present in this trench. Has a sandstone natural to the north and a clay natural to the south					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5

Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
3000	Layer	-	0.3	Topsoil	-	-
3001	Layer	-	0.25	Subsoil	-	-
3002	Layer	-	-	Natural	-	-

Trench 31						
General description					**Orientation**	N-S
Modern hedgerow present in this trench. Topsoil and subsoil overlie a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.59
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3100	Layer	-	0.35	Topsoil	-	-
3101	Layer	-	0.24	Subsoil	-	-
3102	Layer	-	-	Natural	-	-
3103	Cut	1.05	0.32	Cut of Hedgerow	-	-
3104	Fill	1.05	0.32	Fill of Hedgerow ***3104***	-	-

Trench 32						
General description					**Orientation**	NW-SE
No archaeology present in this trench. Has a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3200	Layer	-	0.3	Topsoil	-	-
3201	Layer	-	0.1	Subsoil	-	-
3202	Layer	-	-	Natural	-	-

Trench 33						
General description					**Orientation**	E-W
No archaeology present in this trench. Has a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.3
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3200	Layer	-	0.3	Topsoil	-	-
3201	Layer	-	-	Natural	-	-

Trench 34						
General description					**Orientation**	NW-SE
No archaeology present in this trench. Has a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3400	Layer	-	0.4	Topsoil	-	-

3401	Layer	-	-	Natural	-	-

Trench 35						
General description					**Orientation**	NW-SE
No archaeology present in this trench. Has a clay natural.					**Length (m)**	35
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3500	Layer	-	0.35	Topsoil	-	-
3501	Layer	-	0.15	Subsoil	-	-
3502	Layer	-	-	Natural	-	-

Trench 36						
General description					**Orientation**	N-S
No archaeology present in this trench. Has a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3600	Layer	-	0.3	Topsoil	-	-
3601	Layer	-	0.2	Subsoil	-	-
3602	Layer	-	-	Natural	-	-

Trench 37						
General description					**Orientation**	N-S
No archaeology present in this trench. Has a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.55
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3700	Layer	-	0.28	Topsoil	-	-
3701	Layer	-	0.11	Subsoil	-	-
3702	Layer	-	-	Natural	-	-

Trench 38						
General description					**Orientation**	NE-SW
No archaeology present in this trench. Has a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3800	Layer	-	0.3	Topsoil	-	-
3801	Layer	-	0.2	Subsoil	-	-
3802	Layer	-	-	Natural	-	-

Trench 39						
General description					**Orientation**	E-W
No archaeology present in this trench. Has a clay natural.					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
3900	Layer	-	0.4	Topsoil	-	-
3901	Layer	-	-	Natural	-	-

Trench 40						
General description					**Orientation**	NE-SW
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4000	Layer	-	0.35	Topsoil	-	-
4001	Layer	-	0.1	Subsoil	-	-
4002	Layer	-	-	Natural	-	-

Trench 41						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of subsoil and topsoil overlying colluvial and, in turn, natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.49
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4100	Layer	-	0.21	Topsoil	-	-
4101	Layer	-	0.16	Subsoil	-	-
4102	Layer	-	0.15	Colluvial	-	-
4103	Layer	-	-	Natural	-	-

Trench 42						
General description					**Orientation**	NNW-SSE
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.42
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4200	Layer	-	0.3	Topsoil	-	-
4201	Layer	-	0.12	Subsoil	-	-
4202	Layer	-	-	Natural	-	-

Trench 43						
General description					**Orientation**	NNW-SSE
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4300	Layer	-	0.35	Topsoil	-	-
4301	Layer	-	0.1	Subsoil	-	-
4302	Layer	-	-	Natural	-	-

Trench 44						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4400	Layer	-	0.3	Topsoil	-	-
4401	Layer	-	0.15	Subsoil	-	-
4402	Layer	-	-	Natural	-	-

Trench 45						
General description					**Orientation**	NE-SW
Trench devoid of archaeology. Consists of topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.35
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4500	Layer	-	0.35	Topsoil	-	-
4501	Layer	-	-	Natural	-	-

Trench 46						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of topsoil overlying a thin spread which, in turn, overlies natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.6
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4600	Layer	-	0.4	Topsoil	-	-
4601	Layer	-	0.2	Thin spread	-	-
4602	Layer	-	-	Natural	-	-

Trench 47						
General description					**Orientation**	NE-SW
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4700	Layer	-	0.3	Topsoil	-	-
4701	Layer	-	0.1	Subsoil	-	-
4702	Layer	-	-	Natural	-	-

Trench 48						
General description					**Orientation**	NE-SW
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4800	Layer	-	0.3	Topsoil	-	-
4801	Layer	-	0.15	Subsoil	-	-
4802	Layer	-	-	Natural	-	-

Trench 49						
General description					**Orientation**	N-S
Trench contains two ditches cutting natural clay. Subsequently, overlain by subsoil which, in turn, was overlain by topsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
4900	Layer	-	0.3	Topsoil	-	-
4901	Layer	-	0.1	Subsoil	-	-
4902	Layer	-	0.1	Colluvial layer	-	-
4903	Cut	0.4	0.1	NE/SE aligned Ditch	-	-
4904	Fill	0.4	0.1	Fill of Ditch ***4903***	-	-
4905	Cut	0.5	0.2	E/W aligned Ditch	-	-
4906	Fill	0.5	0.2	Fill of Ditch ***4905***	-	-
4907	Layer	-	-	Natural	-	-

Trench 50						
General description					**Orientation**	N-S
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.35
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5000	Layer	-	0.3	Topsoil	-	-
5001	Layer	-	0.05	Subsoil	-	-
5002	Layer	-	-	Natural	-	-

Trench 51						
General description					**Orientation**	N-S
Trenches contains a ditch cutting natural clay. Subsequently, overlain by subsoil which, in turn, was overlain by topsoil					**Length (m)**	10
					Width (m)	10
					Avg. depth (m)	0.55
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5100	Layer	-	0.3	Topsoil	-	-
5101	Layer	-	0.16	Subsoil	-	-
5102	Layer	-	-	Natural	-	-
5103	Cut	2.8	0.28	Ditch	-	-
5104	Fill	2.8	0.28	Fill of Ditch ***5103***	-	-

Trench 52						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.47
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5200	Layer	-	0.3	Topsoil	-	-
5201	Layer	-	-	Natural	-	-
5202	Cut	1	0.16	Ring Gull	-	-
5203	Fill	1	0.16	Fill of Ring Gully ***5203***	-	-

Trench 53						
General description					**Orientation**	N-S
Natural clay cut by an e/w aligned plough furrow, subsequently, overlain by topsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5300	Layer	-	0.4	Topsoil	-	-
5301	Cut	1.9	0.1	E/W aligned Plough Furrow	-	-
5302	Fill	1.9	0.1	Fill of Plough Furrow ***5301***	-	-
5303	Layer	-	-	Natural	-	-

Trench 54						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5400	Layer	-	0.3	Topsoil	-	-
5401	Layer	-	0.2	Subsoil	-	-
5402	Layer	-	-	Natural	-	-

Trench 55						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.35
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5500	Layer	-	0.3	Topsoil	-	-
5501	Layer	-	0.05	Subsoil	-	-
5502	Layer	-	-	Natural	-	-

Trench 56						
General description					**Orientation**	N-S
Natural clay cut by a ditch and a plough furrow, subsequently overlain by subsoil, which in turn, was overlain by topsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.41
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5600	Layer	-	0.3	Topsoil	-	-
5601	Layer	-	0.11	Subsoil	-	-
5602	Layer	-	-	Natural	-	-
5603	Cut	1.7	0.1	Plough Furrow	-	-
5604	Fill	1.7	0.1	Fill of Plough Furrow ***5603***	-	-
5605	Cut	1.7	0.2	Ditch	-	-
5606	Fill	1.7	0.2	Fill of Ditch ***5605***	-	-

Trench 57						
General description					**Orientation**	NE-SW
Trench devoid of archaeology. Consists of colluvium, subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	1.28
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5700	Layer	-	0.23	Topsoil	-	-
5701	Layer	-	0.26	Subsoil	-	-
5702	Layer	-	0.83	Colluvium	-	-
5703	Layer	-	-	Natural	-	-

Trench 58						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of colluvium, subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.54
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5800	Layer	-	0.25	Topsoil	-	-
5801	Layer	-	0.18	Subsoil	-	-

5802	Layer	-	0.22	Colluvium	-	-
5803	Layer	-	-	Natural	-	-

Trench 59						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of colluvium, subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
5800	Layer	-	0.25	Topsoil	-	-
5801	Layer	-	0.18	Subsoil	-	-
5802	Layer	-	0.22	Colluvium	-	-
5803	Layer	-	-	Natural	-	-

Trench 60						
General description					**Orientation**	NE-SW
Trench devoid of archaeology. Consists of topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.4
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6000	Layer	-	0.4	Topsoil	-	-
6001	Layer	-	-	Natural	-	-

Trench 61						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6100	Layer	-	0.35	Topsoil	-	-
6101	Layer	-	0.15	Subsoil	-	-
6102	Layer	-	-	Natural	-	-

Trench 62						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of colluvium, subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.98
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6200	Layer	-	0.17	Topsoil	-	-
6201	Layer	-	0.15	Subsoil	-	-
6202	Layer	-	0.66	Colluvium	-	-
6203	Layer	-	-	Natural	-	-

Trench 63						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6300	Layer	-	0.4	Topsoil	-	-
6301	Layer	-	0.1	Subsoil	-	-
6302	Layer	-	-	Natural	-	-

Trench 64						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6400	Layer	-	0.4	Topsoil	-	-
6401	Layer	-	0.1	Subsoil	-	-
6402	Layer	-	-	Natural	-	-

Trench 65						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6500	Layer	-	0.35	Topsoil	-	-
6501	Layer	-	0.1	Subsoil	-	-
6502	Layer	-	-	Natural	-	-

Trench 66						
General description					**Orientation**	NW-SE
Two postholes, a plough furrow and a stone drain cut natural clay, overlain by subsoil which, in turn, was overlain by topsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.54
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6600	Layer	-	0.34	Topsoil	-	-
6601	Layer	-	0.2	Subsoil	-	-
6602	Layer	-	-	Natural	-	-
6603	Cut	0.37	0.29	Posthole	-	-
6604	Fill	0.37	0.29	Fill of Posthole ***6603***	-	-
6605	Cut	0.25	0.2	Posthole	-	-
6606	Fill	0.25	0.2	Fill of Posthole ***6605***	-	-

6607	Cut	0.86	0.14	Plough Furrow	-	-
6608	Fill	0.86	0.14	Fill of Plough Furrow ***6607***	-	-
6609	Cut	0.35	0.38	Stone Drain	-	-
6610	Fill	0.35	0.19	Fill of Stone Drain ***6609***	-	-
6611	Fill	0.35	0.25	Fill of Stone Drain ***6609***	-	-

Trench 67						
General description					**Orientation**	NE-SW
A single ditch cutting natural clay, overlain by topsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.47
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6700	Layer	-	0.35	Topsoil	-	-
6701	Layer	-	-	Natural	-	-
6702	Cut	1.32	0.44	Ditch	-	-
6703	Fill	0.96	0.19	Fill of Ditch ***6702***	-	-
6704	Fill	1.32	0.26	Fill of Ditch ***6702***	-	-
6705	Fill	0.25	0.39	Fill of Ditch ***6702***	-	-

Trench 68						
General description					**Orientation**	NE-SW
Plough furrow cutting natural clay, overlain by subsoil which, in turn, was overlain by topsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.48
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6800	Layer	-	0.4	Topsoil	-	-
6801	Layer	-	0.08	Subsoil	-	-
6802	Fill	2.68	0.18	Fill of Plough Furrow ***6803***	-	-
6803	Cut	2.68	0.18	Plough Furrow	-	-
6804	Layer	-	-	Natural	-	-

Trench 69						
General description					**Orientation**	NW-SE
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.55
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
6900	Layer	-	0.33	Topsoil	-	-
6901	Layer	-	0.22	Subsoil	-	-
6902	Layer	-	-	Natural	-	-

Trench 70						
General description					**Orientation**	N/A
North-east/south-west aligned ditch ***7003*** and ***7010*** cutting an earlier north-west/south-east aligned ditch ***7006*** and ***7015***. Both cutting natural geology, overlain by subsoil, which in turn, was overlain by topsoil					**Length (m)**	10
					Width (m)	10
					Avg. depth (m)	0.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
7000	Layer	-	0.35	Topsoil	-	-
7001	Layer	-	-	Natural	-	-
7002	Layer	-	0.1	Subsoil	-	-
7003	Cut	1.4	1.12	Ditch	-	-
7004	Fill	1.4	0.78	Fill of Ditch ***7003***	-	-
7005	Fill	1	0.22	Fill of Ditch ***7003***	-	-
7006	Cut	0.9	0.94	Ditch	-	-
7007	Fill	0.9	0.5	Fill of Ditch ***7006***	-	-
7008	Fill	0.9	0.32	Fill of Ditch ***7006***	-	-
7009	Fill	0.14	0.14	Fill of Ditch ***7006***	-	-
7010	Cut	2.16	1.1	Ditch	-	-
7011	Fill	2.14	0.5	Fill of Ditch ***7010***	-	-
7012	Fill	2.02	0.24	Fill of Ditch ***7010***	-	-
7013	Fill	1.14	0.4	Fill of Ditch ***7010***	-	-
7014	Fill	0.78	0.78	Fill of Ditch ***7010***	-	-
7015	Cut	2.08	1.14	Ditch	-	-
7016	Fill	2.08	0.32	Fill of Ditch ***7015***	-	-
7017	Fill	1.94	0.32	Fill of Ditch ***7015***	-	-
7018	Fill	1.36	0.52	Fill of Ditch ***7015***	-	-

Trench 71						
General description					**Orientation**	NW-SE
North-east/south-west aligned ditch cutting natural clay, overlain by subsoil, which in turn, was overlain by topsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.54
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
7100	Layer	-	0.36	Topsoil	-	-
7101	Layer	-	0.19	Subsoil	-	-
7102	Layer	-	-	Natural	-	-
7103	Cut	4.6	0.6	NE/SW aligned Ditch	-	-
7104	Fill	4.6	0.4	Fill of Ditch ***7103***	-	-
7105	Fill	0.98	0.2	Fill of Ditch ***7103***	-	-

Trench 72			
General description		**Orientation**	NE-SW
Trench devoid of archaeology. Consists of topsoil overlying a natural clay		**Length (m)**	50
		Width (m)	1.8
		Avg. depth (m)	0.4

Context No.	Type	Width (m)	Depth (m)	Description	Finds	Date
7200	Layer	-	0.4	Topsoil	-	-
7201	Layer	-	-	Natural	-	-

Trench 74						
General description					**Orientation**	NEE-SWW
North-west/south-east aligned ditch cutting natural clay, overlain by subsoil, which in turn, was overlain by topsoil					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.45
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
7400	Layer	-	0.32	Topsoil	-	-
7401	Layer	-	0.13	Subsoil	-	-
7402	Layer	-	-	Natural	-	-
7403	Cut	1.25	0.32	NW/SE aligned Ditch	-	-
7404	Fill	1.25	0.32	Fill of Ditch ***7403***	-	-

Trench 75						
General description					**Orientation**	NNE-SSW
Early ditch cutting natural clay, subsequently cut by a later east/west aligned ditch, overlain by subsoil, which in turn, was overlain by topsoil					**Length (m)**	45
					Width (m)	1.8
					Avg. depth (m)	0.5
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
7500	Layer	-	0.13	Topsoil	-	-
7501	Layer	-	0.22	Subsoil	-	-
7502	Layer	-	-	Natural	-	-
7503	Cut	1	0.41	E/W aligned Ditch	-	-
7504	Fill	0.93	0.23	Fill of Ditch ***7503***	-	-
7505	Cut	0.42	0.20	Ditch	-	-
7506	Fill	0.42	0.20	Fill of Ditch ***7505***	-	-
7507	Fill	1	0.19	Fill of Ditch ***7503***	-	-

Trench 76						
General description					**Orientation**	E-W
Trench devoid of archaeology. Consists of subsoil and topsoil overlying a natural clay					**Length (m)**	50
					Width (m)	1.8
					Avg. depth (m)	0.51
Context No.	**Type**	**Width (m)**	**Depth (m)**	**Description**	**Finds**	**Date**
7600	Layer	-	0.28	Topsoil	-	-
7601	Layer	-	0.15	Subsoil	-	-
7602	Layer	-	-	Natural	-	-

APPENDIX C ENVIRONMENTAL REPORTS

C.1 Environmental Samples

By Denise Druce

Introduction

C.1.1 A targeted programme of palaeoenvironmental sampling was implemented in accordance with the Oxford Archaeology *Environmental Sampling Guidelines* (OA 2017). To comply with accepted professional guidelines (EH 2011) between 20 and 40-litre samples, or the entirety of a deposit, were taken to assess their potential for containing palaeoenvironmental remains, including those suitable for radiocarbon dating.

C.1.2 Four samples were retrieved during the evaluation of the site, and these comprise fill ***2605***, from ditch ***2604***, possible occupation layer/spread, ***4601***, fill ***5203*** from possible ring gully ***5202***, and fill ***5606***, from ditch/furrow ***5605***.

Methodology

C.1.3 The samples were floated, where the flot was caught in a 250 µm mesh, and air dried. The retents of the floated samples were washed through 2mm and 500 µm meshes and air dried. The samples were scanned using a *Leica* stereo-microscope and any plant material, including fruits, seeds, charcoal and wood fragments, was recorded. Other remains, such as bone, insects, small artefacts, ceramic building material (cbm), industrial/metal waste, and coal/heat-affected vesicular material (havm) were also noted. Any surviving fruits/seeds were provisionally identified using the modern reference collection held at OA North, and with reference to the *Digital Seed Atlas of the Netherlands* (Cappers *et al* 2006). The presence of modern roots, earthworm eggs and modern seeds was also noted to ascertain the likelihood of any contamination. The remains were quantified on a scale of 1–4 where 1 is rare (one to five items); 2 is frequent (6 to 50 items); 3 is common (51–100 items); and 4 is abundant (greater than 100 items). Plant nomenclature follows Stace (2010). The assessment results were recorded on a *pro-forma*, which will be kept with the site archive.

C.1.4 Wood and charcoal fragments over 2mm in size were quantified and scanned to assess preservation and wood diversity. Identification and classification of the wood was aided by Hather (2000).

Results

C.1.5 The results of the palaeobotanical evaluation are presented in Table 1. Preservation is primarily through charring. Although ditch fill ***2605*** and possible ring gully ***5202*** contained frequent seeds and insect remains, these are likely to be modern.

Context No	Sample No	Feature	Charred plant remains	Charcoal	Other remains
2605	2600	Ditch ***2604***	-	<2mm (1), >2mm (1) Includes alder/hazel, cf blackthorn-type and cf hawthorn-type	Fungal sclerotia (4), coal (1)

4601	4600	Occupation layer/spread	(1) Half a possible pea, a large grass seed, and rare grass stem bases.	<2mm (3), >2mm (1) Oak and indeterminate	Fungal sclerotia (2), coal (2). Hammerscale (1)
5203	5200	Possible ring gully ***5202***	(1) Fat hen seed	<2mm (3), >2mm (2) Includes alder/hazel, birch/willow and oak	Fungal sclerotia (2), coal (2)
5606	5600	Ditch/furrow ***5605***	-	<2mm (2), >2mm (2) oak	Fungal sclerotia (4), coal (1)

Table 1: Palaeobotanical assessment results of samples taken from Methley

Remains are quantified on a scale of 1–4 where (1) is rare (one to five items); 2 is frequent (6 to 50 items); 3 is common (51–100 items); and 4 is abundant (greater than 100 items)

C.1.6 All four of the samples contained charcoal, which including rare to frequent identifiable fragments of oak (*Quercus* sp), alder/hazel (*Alnus glutinosa/Corylus avellana*), possible blackthorn and hawthorn-type (*Prunus*-type and Maloideae), and birch/willow (*Betula*/*Salix* sp).

C.1.7 Charred plant remains other than charcoal were rare, but included a single fat-hen (*Chenopodium album*) seed in possible ring gully ***5202***, and half a possible pea (*Pisum sativum*), a large grass (Poaceae) seed, and rare grass stem fragments in possible occupation layer/spread ***4601***.

C.1.8 All four of the samples contained frequent/abundant fungal sclerotia, which are the resting spores of certain fungi. There is evidence to suggest that fungal sclerotia are more likely to be produced in soils subjected to burning or disturbance (Shay and Kapinga 1997). Consequently, they are often found in charcoal-rich archaeological deposits. Small fragments of coal were also recovered, however, it is unclear whether this is *in-situ*, or originates from modern soils.

Potential

C.1.9 Although only few palaeobotanical remains were recovered during the evaluation, the data has highlighted a potential for the recovery of charred remains from the site. The presence of charcoal from all four features, fat hen (a plant of waste/cultivated soils), and cultivated pea and rare hammerscale from occupation layer/spread ***4601***, provides tentative evidence for local domestic and industrial activity. The identification of possible plough marks in the area, however, means that careful consideration needs to be given to ensure only secure, undisturbed, deposits are sampled. Any charred seeds/fruits, or charcoal representing short-lived wood, would provide suitable material for radiocarbon dating if warranted.

APPENDIX D BIBLIOGRAPHY

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APPENDIX E SITE SUMMARY DETAILS

Site name:	Newmarket Lane, Methley, West Yorkshire
Site code:	NMLM20
Grid Reference	SE 436671 425692
Type:	Evaluation
Date and duration:	14th September – 2nd October 2020; 15 days
Location of archive:	The archive is currently held at OA North, Mill 3, Moor Lane Mills, Moor Lane, Lancaster, LA1 1QD, and will be deposited with West Yorkshire Archaeological Advisory Service in due course.
Summary of Results:	The archaeological remains in the eastern halves of Field 3 and 5 corresponded well with the geophysical survey results, which had highlighted areas of strong archaeological potential in these areas. The remains identified in Trenches 49, 51, and 56 in Field 3 were suggestive of a possible enclosure, which likely enclosed ring features, as seen in Trench 52. The remains identified in Trenches 70 and 71 in Field 5 were suggestive of a substantial enclosure, with the remains in Trench 70 displaying evidence of possible internal divisions to this enclosure. None of the remains identified contained much in the way of dating evidence, however, there was presence of charred plant remains and charcoal within archaeological features which were sampled for palaeoenvironmental remains. There was also evidence for hammerscale, recovered from a possible occupation layer in Trench 46, which might suggest that metal working had been undertaken in the vicinity of that trench. Although there was no dating evidence recovered from the features identified, their form appears to be similar to that of late prehistoric or Romano-British features encountered elsewhere.

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