MAP

ARCHAEOLOGICAL PRACTICE Ltd.

Land South-east of Old Malton Road
Old Malton
North Yorkshire

SE 7948 7220

MAP 5.44.2012

Archaeological Evaluation by Trial Trenching

MAP
ARCHAEOLOGICAL PRACTICE LTD

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Report Prepared By	Report Authorised By
	
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Non Technical Summary

This report has been undertaken by MAP Archaeological Practice Ltd under instruction from Nick Silcock of Townscape Architects on behalf of the Injured Jockeys Fund, to evaluate the Historical and Archaeological background, and to assess the impact of the proposed residential development comprising a Jockey Rehabilitation Centre on land to the south-east of Old Malton Road, Old Malton, North Yorkshire.

A Geophysical Survey undertaken by West Yorkshire Archaeology Service in March 2004 noted an archaeological anomaly interpreted as an enclosure.

Five evaluation trenches over the area of the proposed Jockey Rehabilitation Centre were excavated, each measured 20m by 2m in size. Four of the five trenches uncovered archaeological deposits, features and finds including prehistoric flint, Iron Age and Roman pottery, fragments of copper alloy sheet and fragments of animal bone.

The archaeology is assessed as "local significance" and with appropriate mitigation would not prevent development.

1. Introduction

1.1 The Archaeological Evaluation was commissioned by Nick Silcock of Township Architects acting on behalf of the Injured Jockeys Fund to assess the impact of the proposed rehabilitation centre on land to the south-east of Old Malton Road, Old Malton, North Yorkshire (SE 7948 7220: Fig. 1) and in accordance with a Written Scheme of Investigation

approved by Lucie Hawkins of the Heritage Unit, North Yorkshire County Council (Appendix 8).

1.2 Archaeological, Historical and Architectural remains are protected by means of Statutory Instruments (including Scheduled Ancient Monument Legislation and National Planning Policy Framework March 2012 – 12 Conserving and enhancing the historic environment)

1.3 This report was funded by Injured Jockeys Fund.

1.4 All maps within this report have been produced from Ordnance Survey with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright. License No. AL 50453A.

2. Site Description

2.1 The site encompasses an area of approximately 115m by 63m and is accessed from Old Road to the north-west sharing access with the Malton Rugby Club (Figs. 1 & 2). The site is currently in use as an agricultural field.

2.2 To the north is the Football Field, to the east is the Rugby Club, to the south and west is the agricultural field.

2.3 Malton lies on a ridge of oolitic limestone, which is bisected by a shallow north-south post-glacial valley (OS 1960). The sites lies on the edge of the shallow valley to the west of the River Derwent. The soils are of the Elmton 2 Association (Mackney *et al.* 1984).

3. Archaeological and Historical Background

3.1 Malton is located in the District of Ryedale in County of North Yorkshire and was formerly Old and New Malton in the Wapentake of Ryedale in the North Riding of the County of York.

3.2 Malton was the site of the Roman fort of *Derventio* that was established in the first century A.D. in the territory of the Brigantes, and guarded the river crossing. The main fort was located at Orchard Fields, and a civilian settlement or *vicus* extended southwards from the fort to the river (Corder 1930 & Michelson 1964). Norton, to the south of the river, also formed part of the extensive Roman Town, with a ford and road leading to Malton. The fort and the *vicus* developed through many phases of activity and re-building during the Roman occupation until it declined in the fourth century. The Roman Fort and vicus at Orchard Fields is a Scheduled Ancient Monument (Monument No, 285). Recent archaeological work has suggested that the area of Roman occupation was far more extensive than previously thought. Settlement appears to extend north-west of the fort. The Archaeological supervision of the topsoil and subsoil stripping during the construction of Malton Rugby Club in 1994 and the leveling of the pitches uncovered a substantial Roman site, including the line of the Roman Road, three buildings and associated cremation burials. A Geophysical Survey of the area between the Orchard Fields and Old Malton, south-east of Old Malton Road was undertaken by WYAS in 2004 (Fig. 4) and showed an enclosure in the field north-west of the Rugby Club. This enclosure had previously been noted as an Aerial Photographic cropmark.

3.3 The place-name Malton derives from the Old English meaning middle farm. The Old English name was Scandinavianised as in the more usual Melton from Old English '*midel'* or Old Norse *meðel* and Old English *tun* (Field 1980). Malton has the derivations of *Maltune* in 1086, *Maaltun* in 1130, *Malton(e)* in 1173, *Mealton* in 1191, *Meuton* in 1218 and *Melton* in 1294 (Smith 1979, 43).

3.4 The Domesday Book of 1086 notes the settlement at Old Malton in four entries and states that "in Old Malton, Siward and Thorketill, 8 carucates of land taxable. Land for 2 ploughs. Now, there are there 1 ½ ploughs in lordship; and 7 villagers and 5 smallholders with 3½

ploughs. A church there and 1 mill site. Value before 1066 20s; now 10s" and "In Old Malton Kolbrandr, 3 carucates taxable. Land for 1 ½ ploughs. There is there1 villager with half a plough. Meadow 16 acres. 1 league long and 1 wide. Value before 1066 10s; now 5s. There are 2 bovates of land taxable, a jurisdiction of the same manor (Faull and Stinson 1986, 1N65-66). Also, " In Old Malton, I carucate of land taxable. Ulfr held 1 manor" (ibid, 2N7), "In Old Malton, Odfrida ½ carucate" (ibid, 5N37), and "The Archbishop in Old Malton held 1 carucate. The King in the same place 11½ carucates. The Count of Mortain in the same place 1½ carucates" (ibid, SN MA 5-6).

3.5 The Manor of Malton had a settlement and church predating 1066 based in Old Malton. Fragments of decorated stone from the Saxon Period have been found at the Priory in Old Malton. The medieval village Old Malton was probably aligned along the south-west to north-east street (Town Street), with the addition of Westgate at the northern end of the village. There were twenty-three households paying the sum of £3 16s 11d at the time of the 1302 lay subsidy.

3.6 The Priory at Old Malton was founded around 1150 by Eustace fitzJohn and belonged to the Gilbertine Order. The present parish church comprises the western part of the nave and two-thirds of the original façade of the Priory church. The Priory also owned land and houses at Old Malton, the Lascelles family granting their estate in the village to the Priory in the thirteenth century (Hudleston, 1962). The Priory at Old Malton is a Designated Heritage Asset (Scheduled Monument No. 383).

3.7 In the early twelfth century a castle was built overlooking the River Derwent above Castlegate by the Vesey family. The Castlegate area of Malton may have formed a separate borough under the jurisdiction of the castle (Robinson,1978, 13-14). It is uncertain whether this was a separate borough or suburb had defensive walls. The castle was

demolished by Henry II. The site of Malton Castle is a Designated Heritage Asset (Scheduled Ancient Monument No.1261).

3.8 The Borough of New Malton, was founded in the mid twelfth century, a crown holding managed by stewards. It has been suggested that the stone defences for the town wall were constructed some time in the thirteenth century. There is a late fifteenth century reference to the walls of the town, through which four gates gave access (Robinson 1978, 30). The course of the Town Wall has been provisionally traced and in effect follows the borough boundary. A charter of Henry II (1154 – 1179) referred to Malton as one of his desmesne boroughs. In 1184, the burgesses were tallaged, a common form of Royal Revenue (Beresford and Finberg 1973, 1187). There are twelfth and thirteenth century references to weavers, goldsmiths, masons and mercers, and fourteenth century references to wool-merchants. The market was first mentioned in 1283, and the fair in 1295 (Huddleston 1962).

3.9 The dissolution of Old Malton Priory was conducted in December 1539. Part of the nave of the Priory Church forms the Parish Church of St. Mary. In the sixteenth century, on the site of the Malton castle Ralph, Lord Eure built a mansion, which only the gatehouse survives as the Lodge.

3.10 During the Civil War, Malton in 1644 was held by Royalist forces, who were defeated by the Earl of Newcastle's forces after a siege (VCH, 530). The town walls are said to have been damaged at this time, and have subsequently suffered piecemeal destruction.

3.11 In 1713, the Manors of Old and New Malton were purchased by Sir Thomas Wentworth. Sir Thomas Wentworth enlarged the Estate and was created Lord Malton in 1728, Earl of Malton in 1733 and the Marquis of Rockingham in 1746. Charles Wentworth became the second Marquis of Rockingham. In 1744, Anne Watson Wentworth married William Fitzwilliam (the third Earl). The estate expanded and

acquired property over the next two hundred years. The archive for the estate reveals the acquisitions (NYCRO ZPB III 8/7/2 – 8).

3.12 In the early eighteenth century "The Derwent Navigation Act" was passed which improved the navigability of the river, along with the River Ouse. The work was carried out from 1702 to the 1720s and seems to have led to industrial development along the River Derwent in Malton (Huddleston 1962).

3.13 The Pickering to Old Malton Turnpike Trust constructed a road in 1786 (now Town Street). The York and Scarborough Railway was opened in 1845, with Malton Station constructed at the southern end of Railway Street (NYCRO QDP (M) 68/1) in Malton.

3.14 The First Edition Ordnance Survey Town Series Map dates to 1854 and depicts the Proposed Development Site as part of two agricultural fields (Fig. 3).

4. Aims and Objectives

4.1 Any ground-works in the area of the proposed development had the potential to damage or destroy *in-situ* archaeological deposits and features.

4.2 The aim of the Archaeological Evaluation was to determine the nature, date, quality of survival and importance of any archaeological deposits present on the site. This was to enable an assessment of the archaeological potential and significance of the site to be made and to allow an appropriate mitigation strategy to be formulated prior to the commencement of the re-development.

5. Methodology

5.1 Five Evaluation trenches were excavated, each measuring 20m by 2m, covering a total of 200m^2, as stipulated in the Written Scheme of Works. Excavation took place between the 20th September and 3rd

October 2011. An earthwork Survey was undertaken on the 2nd October 2011 using a Leica TC-600 Total Station.

- **Evaluation Trench 1** covered an area of 40m^2 (20m x 2m); aligned north-west by south-east (NGR at the Corners: ^{4}79520.30, ^{4}72288.29; ^{4}79521.47, ^{4}72289.91; ^{4}79505.26, ^{4}72301.63 & ^{4}79504.09, ^{4}72300.01)
- **Evaluation Trench 2** covered an area of 40m^2 (20m x 2m), aligned north-south (NGR at the Corners: ^{4}79508.76, ^{4}72286.43; ^{4}79506.79, ^{4}72286.08; ^{4}79510.28, ^{4}72266.39 & ^{4}79512.25, ^{4}72266.74)
- **Evaluation Trench 3** covered an area of 40m^2 (20m x 2m), aligned north-east by south-west (NGR at the Corners: ^{4}79509.41, ^{4}72263.16; ^{4}79507.78, ^{4}72264.30; ^{4}79496.31, ^{4}72247.92 & ^{4}79497.95, ^{4}72246.77)
- **Evaluation Trench 4** covered an area of 40m^2 (20m x 2m), aligned north-east by south-west (NGR at the Corners: ^{4}79492.63, ^{4}72277.51; ^{4}79491.02, ^{4}72278.71; ^{4}79479.05, ^{4}72262.69 & ^{4}79480.66, ^{4}72261.49)
- **Evaluation Trench 5** covered an area of 40m^2 (20m x 2m), aligned north-south (NGR at the Corners: ^{4}79481.87, ^{4}72254.75; ^{4}79479.87, ^{4}72254.67; ^{4}79480.67, ^{4}72234.68 & ^{4}79482.67, ^{4}72234.76)

5.2 Turf, topsoil and subsoil were excavated using a back acting JCB 3CX mechanical excavator with toothless ditching bucket supplied by Thackrays Plant Hire. Topsoil overburden and subsoil were placed in separate spoil heaps.

5.3 After removal of overburden, the excavation areas were hand-cleaned. All deposits and features was recorded on *pro-forma* Context Record Sheets (Appendix 1), according to guidelines laid down in the MAP Excavation Manual. The following contexts were assigned; Evaluation

Trench 1 (1001), Evaluation Trench 2 from 2001 to 2009, Evaluation Trench 3 from 3001 to 3004, Evaluation Trench 4 from 4001 to 4018 and Evaluation Trench 5 from 5001 to 5012.

5.4 Forty-eight artefacts were collected from Evaluation Trenches 2, 3, 4 and 5 (Appendix 2) and comprised two flint artefacts, five fragments of copper alloy sheet, seventeen sherds of pottery, twenty-one fragments of animal bone, one shell, one fragment of burnt daub and one fragment of cinder. Pottery was identified and spot dated by Paula Ware, the animal bone was assessed by Jane Richardson, the bronze object was assessed and stabilised by YAT Conservation Laboratory and the flint was dated and assessed by Pete Mackey.

5.5 Topsoil and subsoil that were mechanically removed as part of the overburden were recorded in section and by record only. Trench Sections and plans were drawn at a scale of 1:20 and included an Ordnance Survey Datum height (Appendix 3). Feature sections were drawn at a scale of 1:10. In total, twenty-seven drawings were archived.

5.6 The photographic record comprised sixty-four digital shots. The Photographic Record of features and general trench shots included a film register noting film number, shot number, location of shot, direction of the shot, and a brief description of the subject (Appendix 4).

5.7 Sixteen soil samples were taken for environmental analysis (Appendix 5). The samples were processed by MAP and the flots assessed by Diane Aldritt.

5.8 The surveying of the trenches was undertaken by two qualified archaeological surveyors.

6. Results

6.1 Evaluation Trench 1 (Figs. 5-6; Pls. 1-2)

6.1.1 Summary

There were no archaeological features noted in Evaluation Trench 1, which confirmed the negative results of the Geophysical Survey (Figs, 4 & 5) in this area. Existing ground level was at a height of 25.89m AOD – 25.12m AOD. Natural frost fractured ooliitic limestone was revealed at between 25.10m AOD and 24.95m AOD.

6.2 Evaluation Trench 2 (Figs. 5-7; Pls. 3-7)

6.2.1 Summary

There were no archaeological anomalies on the geophysical survey (Figs. 4 & 5) in the area of Evaluation Trench 2. Three archaeological features were revealed in the southern end of Evaluation Trench 2. Existing ground level was at a height of between 25.41m AOD and 24.70m AOD. Subsoil was encountered between 25.15m AOD and 24.48m AOD. Natural oolitic limestone was encountered in Evaluation Trench 2 at a depths between 25.05m AOD and 24.35m AOD.

6.2.2 Phase 1: Iron Age/Roman Features

Three features were uncovered in Trench 2, two narrow and shallow linear features (cuts 2004 and 2006) and a linear ditch (cut 2009). All three features were aligned north-west by south-east.

The northernmost feature was a narrow and shallow gully (cut 2004), measuring 0.38m wide and 0.17m deep. A one metre long segment was excavated through linear feature 2004 to reveal a trough shaped profile cut into the limestone natural. Cut 2004 was filled by deposit 2003, a clay silt with limestone inclusions. The top of fill 2003 was at c. 24.59m AOD and the base of cut 2004 was at 24.42m AOD. Two sherds of pottery were recovered from the excavated fill, dating to the Iron Age\Roman period. The environmental flot from deposit 2003 contained a single very small fragment of oak charcoal (Appendix 5).

Between gully 2004 and ditch 2009 there was a narrow furrow-like linear feature (cut 2006), which terminated at its north-western end. Cut 2006 was 0.20m wide and 0.10m deep. A one metre long segment was excavated through this feature at the terminal end. Furrow 2006 was cut into limestone natural with a shallow U-shaped profile, and was filled by silty clay deposit 2005. No finds were recovered from deposit 2005. The top of fill 2005 was at 24.43m AOD and the base of cut 2006 was at 24.33m AOD.

Ditch 2009 was located at the southern end of Trench 2. A one metre long segment was excavated at the north-western side of this feature. Ditch 2009 contained two fills, deposits 2007 and 2008 and was cut into limestone natural. Cut 2009 was 0.95m wide and 0.45m deep with a flat based V-shaped ditch profile. The primary fill was context 2008, a 0.28m deep deposit of fine sandy silt with limestone fragments and cobble inclusions. The upper fill was context 2007, a 0.12m deep deposit of slightly clay silt with limestone inclusions. Two sherds of Roman pottery, animal bone and fragments of copper alloy sheet binding were recovered from deposit 2007 (Appendices 2, 6 and 7). The top of fill 2007 was at 24.43m AOD, the top of fill 2008 was at 24.31m AOD and the base of cut at 23.95m AOD. The environmental flot from deposit 2007 contained a small heather-type stem (Appendix 5).

Ditch 2009 did not correspond with the aerial photographic cropmark or the geophysical anomaly as seen on Figure 4. Its alignment suggests that the north-eastern boundary of the enclosure may extend south-eastwards.

6.2.3 Phase 2: Modern Overburden

The archaeological features were sealed by a thin layer of subsoil (context 2002 – a deposit of clay silt), which was in turn covered by the deposit of ploughsoil (context 2001).

6.3 Evaluation Trench 3 (Figs. 5, 6 & 8; Pls. 8-10)

6.3.1 Summary

There were no archaeological anomalies on the geophysical survey (Figs. 4 & 5) in the area of Evaluation Trench 3. A single pit was revealed at the south-western end of Evaluation Trench 3. Existing ground level was at a height of between 24.63m AOD and 24.49m AOD. Subsoil was encountered between 24.39m AOD and 24.23m AOD. Natural oolitic limestone was encountered in Evaluation Trench 3 at depths between 24.29m AOD and 24.11m AOD.

6.3.2 Phase 1: Iron Age/Roman Features

A sub-rectangular pit (cut 3004) was located at the south-western end of Trench 3, with a diameter pf 0.71m and a depth of 0.26m. Pit 3004 was half sectioned with the eastern half of the fill excavated to reveal a flat based U-shaped profile cut into limestone natural. The fill, context 3003 was a deposit of sandy clay. Fragments of animal bone were recovered from the fill. The top of fill 3003 was at 24.09m AOD and the base of cut 3004 was at 23.85m AOD. The environmental flot from deposit 3003 contained one very poorly preserved indeterminate cereal grain, which could represent trace material from nearby cereal drying or cooking activity.

6.3.3 Phase 2: Modern Overburden

The archaeological features were sealed by a thin layer of subsoil (context 3002 – a deposit of clay silt), which was in turn covered by the deposit of ploughsoil (context 3001).

6.4 Evaluation Trench 4 (Figs. 5, 6, 9 & 11; Pls. 11-19)

6.4.1 Summary

The Geophysical Survey proposed the north-eastern ditch of the enclosure would bisect this trench. Eight archaeological features were revealed in Evaluation Trench 3 and included a linear feature/ditch, three postholes and four pits. Existing ground level was at a height of between 25.51m AOD and 25.29m AOD. Subsoil was encountered at

between 25.05M AOD and 25.06m AOD. Natural limestone was encountered in Evaluation Trench 4 at a depths between 24.95m AOD and 25.05m AOD.

6.4.2 Phase 1: Iron Age/Roman Features

At the north-eastern end of Trench 4, there were two pits and two postholes. Pit 4004 was sub-circular in plan and measured 1.69 by 1m and was 0.19m deep. Pit 4004 was half sectioned with the south-western half of fill 4003 excavated to reveal a flat bottomed U-shaped profile. Fill 4003 was a sandy clay deposit with limestone inclusions. The top of fill 4003 was at 24.99m AOD and the base of cut 4004 was at 24.71m AOD. Posthole 4006 was sub-circular in plan and measure 0.89m by 0.49m and was 0.210m deep, with a broad U-shaped profile cut into limestone natural. Posthole 4006 was half sectioned with the eastern half of fill 4005 excavated. Fill 4005 was a slightly sandy clay with limestone inclusions. The top of fill 4005 was at 25.01m AOD and the base of cut 4006 was at 24.83m AOD. Posthole 4008 was sub-circular in plan with a diameter of 0.29m and a depth of 0.23m. Posthole 4008 was half sectioned with the eastern half of fill 4007 excavated to reveal a v-shaped profile cut into limestone natural. Fill 4007 was a slightly sandy clay with limestone inclusions. The top of fill 4007 was at 25.01m AOD and the base of cut 4008 was at 24.82m AOD. Pit 4010 was elongated sub-circular in plan and measured 1.10m long, 0.54m wide and 0.15m deep. Pit 4010 was half sectioned with the northern half of fill 4009 excavated to reveal a wide U-shaped profile cut into limestone natural. Fill 4009 was a slightly sandy clay with occasional limestone inclusions. The top of fill 4009 was at 24.98m AOD and the base of cut 4010 was at 24.84m AOD. No finds were recovered from deposit 4003, 4005, 4007 and 4009. The environmental plot from deposit 4003 contained small amounts of wood charcoal (oak and hazel) and a single grain of wheat. The environmental flot from deposit 4009 produced birch charcoal (Appendix 5).

At the south-western end of Trench 4 there were three pits and linear ditch. Pit 4012 was sub-rectangular in plan measured 1m by 0.64m wide and 0.26m deep. Pit 4012 was half sectioned and the south-western half of fill 4011 excavated to reveal a flat based U-shaped profile cut into limestone natural. Fill 4011 was a sandy clay and contained a flint blade. The top of fill 4011 was at 25.02m AOD and the base of cut 4012 was at 24.81m AOD. Pit 4014 was sub-circular in plan with a diameter of 0.53m and a depth of 0.19m. Pit 4014 was half sectioned and the south-western half of fill 4013 was excavated to reveal a V-shaped profile cut into limestone natural. Fill 4013 was a sandy clay with gritty inclusions. No finds were recovered from deposit 4013. The top of fill 4013 was at 25.03m AOD and the base of cut 4014 was at 24.86m AOD. Pit 4016 was sub-circular in plan and contained burnt material (ash and charcoal in fill 4015), which measured 0.66m in diameter and was 0.19m deep. Pit 4016 was half sectioned with the north-eastern half of fill 4015 excavated, which was cut into ditch fill 4017 and had a round based U-shaped profile. Fill 4015 contained charcoal, ash, burnt stones in a slightly sandy clay matrix. A fragment of burnt daub, cinder and Iron Age/Roman pottery were recovered from fill 4015 (Appendix 2). The environmental flot from deposit 4015 produced grain, some cereal chaff, and evidence for the use of peat or heathy turves for fuel, consistent with the deliberate dump of cereal processing waste from corn drying or other farming activity (Appendix 5).

Linear Feature/Ditch 4018 was located against the south-eastern baulk of Trench 4 and was aligned north-east by south-west. A one metre wide segment was excavated with pit 4016 at the south end. The ditch measured 8m in length, 0.72m wide and 0.21m deep. Fill 4017 was a slightly sandy clay with limestone and cobble inclusions. A sherd of Iron Age/Roman pottery, a flint flake and animal bone was recovered from deposit 4017. The top of deposit 4017 was at 24.95m AOD and the base of cut 4018 was at 24.51m AOD. The environmental flot from deposit 4017 produced number of wheat grains (Appendix 5).

Ditch 4018 may correspond with the south-eastern extent of the cropmark and geophysical anomaly. There was no clear indication of the north-eastern extend of the enclosure at the north-eastern end of Evaluation Trench 2, but Pit 4004 may equate to a terminal of the ditch rather than a pit.

6.4.3 Phase 2: Modern Overburden

The archaeological features were sealed by a thin layer of subsoil (context 4002 – a deposit of clay silt), which was in turn covered by the deposit of ploughsoil (context 4001). Sherds of Samian ware, Greyware and Roman Oxidised Coarseware were recovered from the subsoil (context 4002).

6.5 Evaluation Trench 5 (Figs. 5, 6, 10 & 11: Pls. 20-26)

6.5.1 Summary

The Geophysical Survey (Figs. 4 and 5) proposed that the south-eastern extent of the enclosure would bisect the northern end of Trench 5. Five archaeological features were revealed in Evaluation Trench 5 including two furrows, one linear, a pit and a natural feature/pit. Existing ground level was at a height of between 26.60m AOD and 26.69m AOD. Subsoil was encountered at 26.18m AOD. Natural sand was encountered in Evaluation Trench 3 at a depth of circa 25.78m AOD.

6.5.2 Phase 1: Iron Age/Roman Features

Three archaeological features were excavated at the northern end of Trench 5. A linear feature 5004 was aligned north-west by south-east and measured 2.10m long, 1.30m wide and 0.40m deep. A one metre segment was excavated at the south-western side of the trench. Ditch 5004 was cut into limestone natural, with a wide V-shaped profile with rounded base and was filled by context 5003. a slightly clay silty sand with occasional limestone inclusions. A sherd of Iron Age/Roman pottery was recovered from deposit 5003. The environmental flot from

deposit 5003) taken from linear feature (5004), contained a nicely preserved wheat and a small amount of oak charcoal, which may represent cooking or cereal drying waste. The top of fill 5003 was at 24.72m AOD and the base of cut 5004 was at 24.33m AOD. Ditch 5004 may represent the presence of the south-eastern boundary enclosure ditch at the northern end of Evaluation Trench 5. Pit 5006 was sub-rectangular in plan, which measured 1.20m by 1.10m and was 0.35m deep. Pit 5006 was half sectioned with the eastern half of fill 5005 was excavated to reveal a flat based U-shaped profile cut into limestone natural. Pit 5006 was filled by 5005, a slightly clay silty sand. The top of fill 5005 was at 24.63m AOD and the base of cut 5006 was at 24.21m AOD. The environmental flot from deposit 5005 produced very tiny trace slivers of wood charcoal (Appendix 5). Cut 5008 was either a pit or a natural feature, which was sub-rectangular in plan and measured c. 1m in diameter and 0.25m deep. Cut 5008 had a flat based U-shaped profile and was filled by slightly clay silty sand deposit (context 5007). The top of fill 5007 was at 24.72m AOD and the base of cut 5008 at 24.48m AOD. No finds were recovered from deposits 5005 or 5007.

In the southern half of Trench 5, there were two shallow features (cuts 5010 and 5012). Both features were aligned north-east by south-west. A one metre wide segment was excavated through the centre of Linear feature 5010, which measured 1.30m wide and 0.20m deep. Cut 5010 was filled by a slightly clay silty sand (context 5009) and contained a sherd of Roman pottery, animal bone fragments and a limpet shell. The top of fill 5009 was at 24.14m AOD and the base of cut 5010 was at 23.82m AOD. Shallow feature 5012 terminated to the north-west with a rounded end and measured 1.40m by 0.70m and 0.10m deep. A one metre long segment was excavated at the terminal. Cut 5012 was filled by deposit 5011, a slightly clay silty sand which contained fragments of animal bone. The top of fill 5011 was at 24.07m AOD and the base of cut 5012 was at 23.96m AOD. The environmental flots

from deposits 5009 and 5011 consisted of extremely small fragments of oak charcoal and a single heather-type stem in 5011 (Appendix 5).

6.5.3 Phase 2: Modern Overburden

The archaeological features were sealed by a thin layer of subsoil (context 5002 – a deposit of clay silt), which was in turn covered by the deposit of ploughsoil (context 5001). A base sherd from a Roman oxidized coarseware jar and a sherd of Medieval Pottery were recovered from the subsoil during stripping (context 5002).

7. Impact of the Development

7.1 The Archaeological Evaluation by Trial Trenching has shown only a minimal of coverage, between 30 and 40cm below ground level covering the surviving archaeological features. Four of the trenches contained archaeological features and three trenches produced evidence of Iron Age/Roman pottery.

7.2 To mitigate the impact of the groundworks of the Proposed Development, full excavation in the area of the new build would preserve the archaeological remains by record in advance of construction beginning (Appendix 9).

8. Conclusions

8.1 The Archaeological Evaluation was undertaken to evaluate the impact of the proposed development on the archaeological features, deposits and finds. The area south-east of the proposed development area had already produced evidence of substantial Roman remains during the construction of the clubhouse and the levelling of the pitches at Malton and Norton Rugby Club. In the field north-west of the Rugby Club there was an known aerial photographic cropmark and geophysical survey anomaly interpreted as an enclosure.

8.2 Of the five trenches excavated, four produced archaeological features including pits, postholes, linear ditches and furrows and produced finds ranging from Prehistoric Flint, Iron Age and Roman Pottery and a fragment of copper alloy sheet. The largest sherds of pottery all came from the subsoil horizon. The environmental samples produced charcoal and cereal grains interpreted as evidence of cereal drying or cooking. The linear features/ditches present in Evaluation Trenches 4, and 5 may equate to the Geophysical Survey anomalies. The linear feature at the southern end of Evaluation Trench 2 suggests the north-eastern boundary of the enclosure may extend south of the alignment from the Geophysical Survey Results.

8.3 The Evaluation has shown the archaeology is earlier and probably native rather than, military in focus unlike the findings from the Rugby Club excavations to the south-east. The enclosure and its associated features are likely to span the late Iron Age/Early Roman period and provided relatively few finds. The archaeology uncovered is of local importance and with the proposed mitigation there is nothing to prevent development.

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10. List of Contributors

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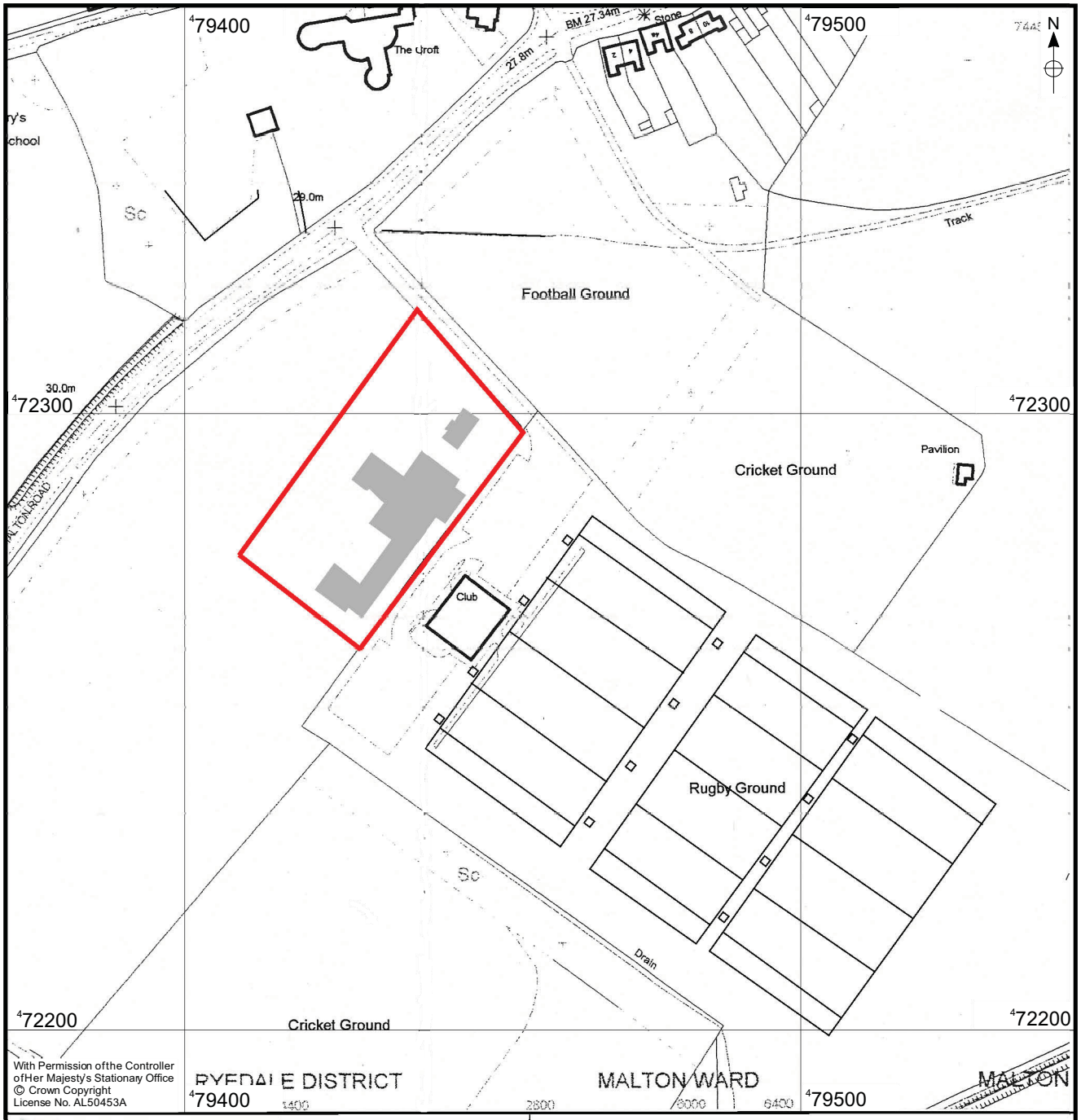
MAP Archaeological Practice Ltd Heritage Consultants	**TITLE**: Site Location.
SITE: Land to the South-east of Old Malton Road, Old Malton, North Yorkshire	**FIGURE**: 1. **Scale**: 1:50,000
CLIENT: Injured Jockey's Fund	**DRAWN BY**: KCH



MAP Archaeological Practice Ltd
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TITLE: Proposed Development Area.

SITE: Land South-east of Old Malton Road, Malton, North Yorkshire

FIGURE: 2.

Scale: 1:1,000

CLIENT: Injured Jockey's Fund

DRAWN BY: KCH

MAP Archaeological Practice Ltd
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TITLE: Extract from the 1854 First Edition Ordnance Survey Map.

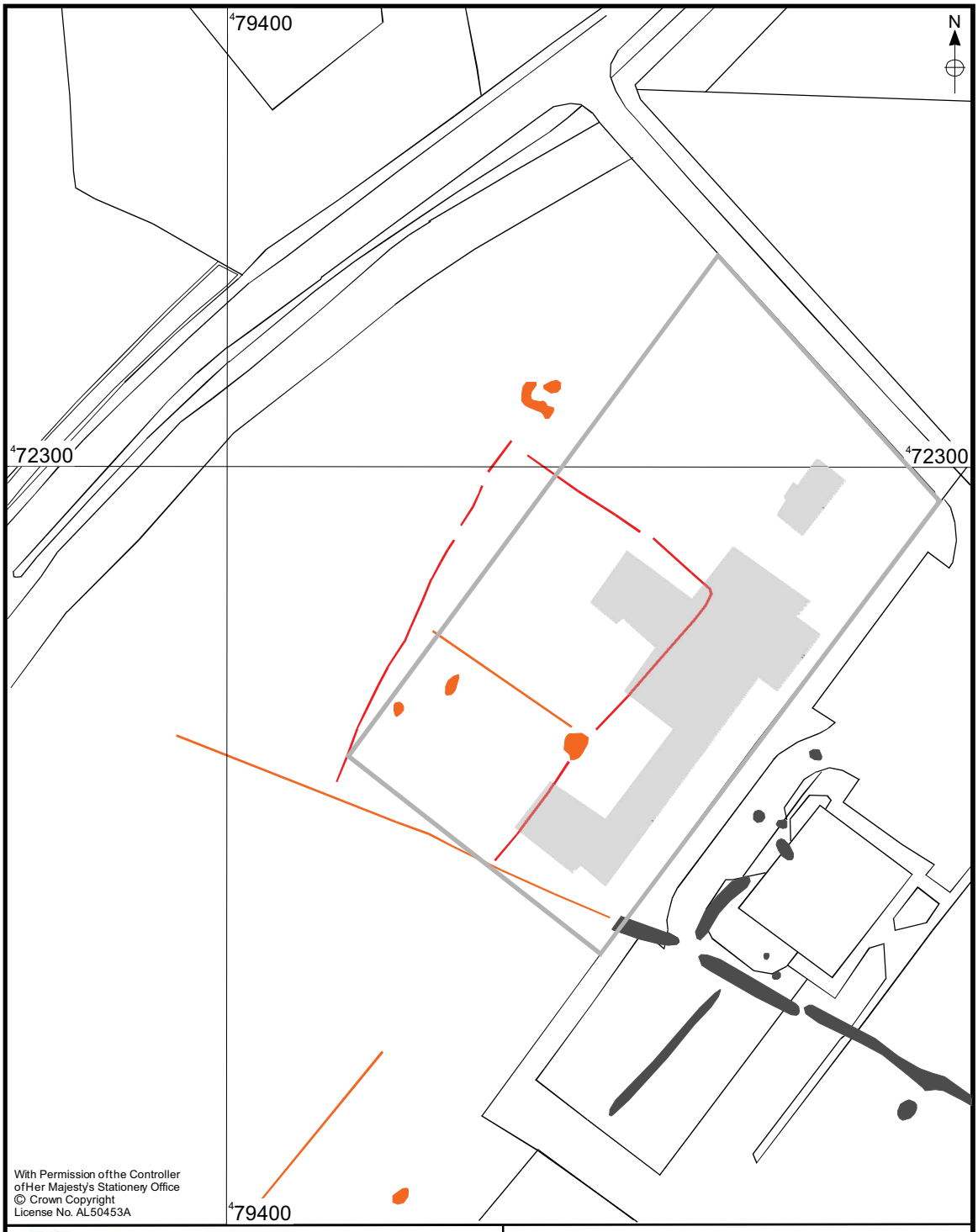
SITE: Land South-east of Old Malton Road, Malton, North Yorkshire

FIGURE: 3.

Scale: 1:2,500

CLIENT: Injured Jockey's Fund

DRAWN BY: KCH



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TITLE: Geophysical Survey Results.

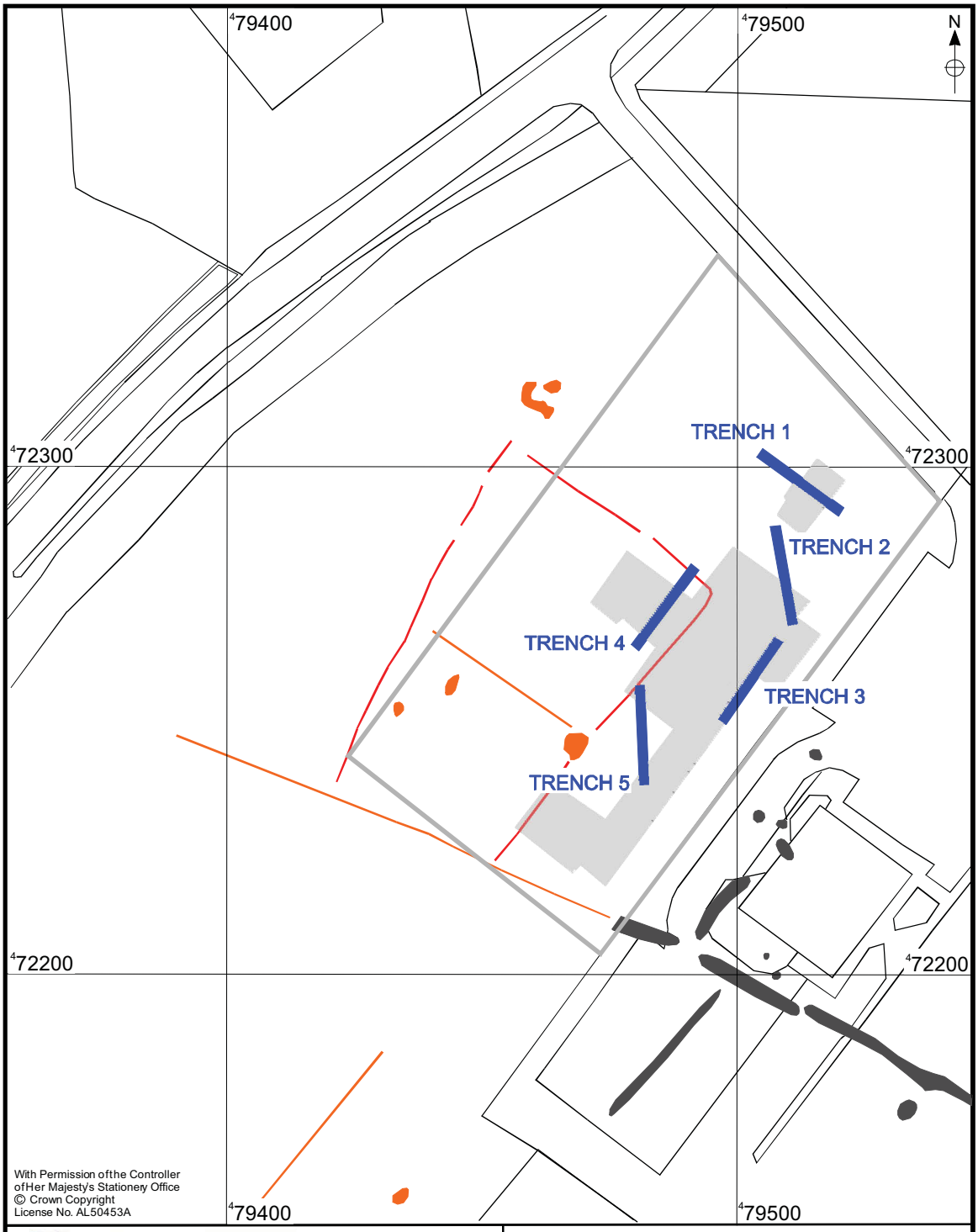
SITE: Land to the South-east of Old Malton Road, Old Malton, North Yorkshire

FIGURE: 4.

Scale: 1:1,250

CLIENT: Injured Jockey's Fund

DRAWN BY: KCH



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TITLE: Location of Evaluation Trenches.

SITE: Land to the South-east of Old Malton Road, Old Malton, North Yorkshire

FIGURE: 5.

Scale: 1:1,250

CLIENT: Injured Jockey's Fund

DRAWN BY: KCH

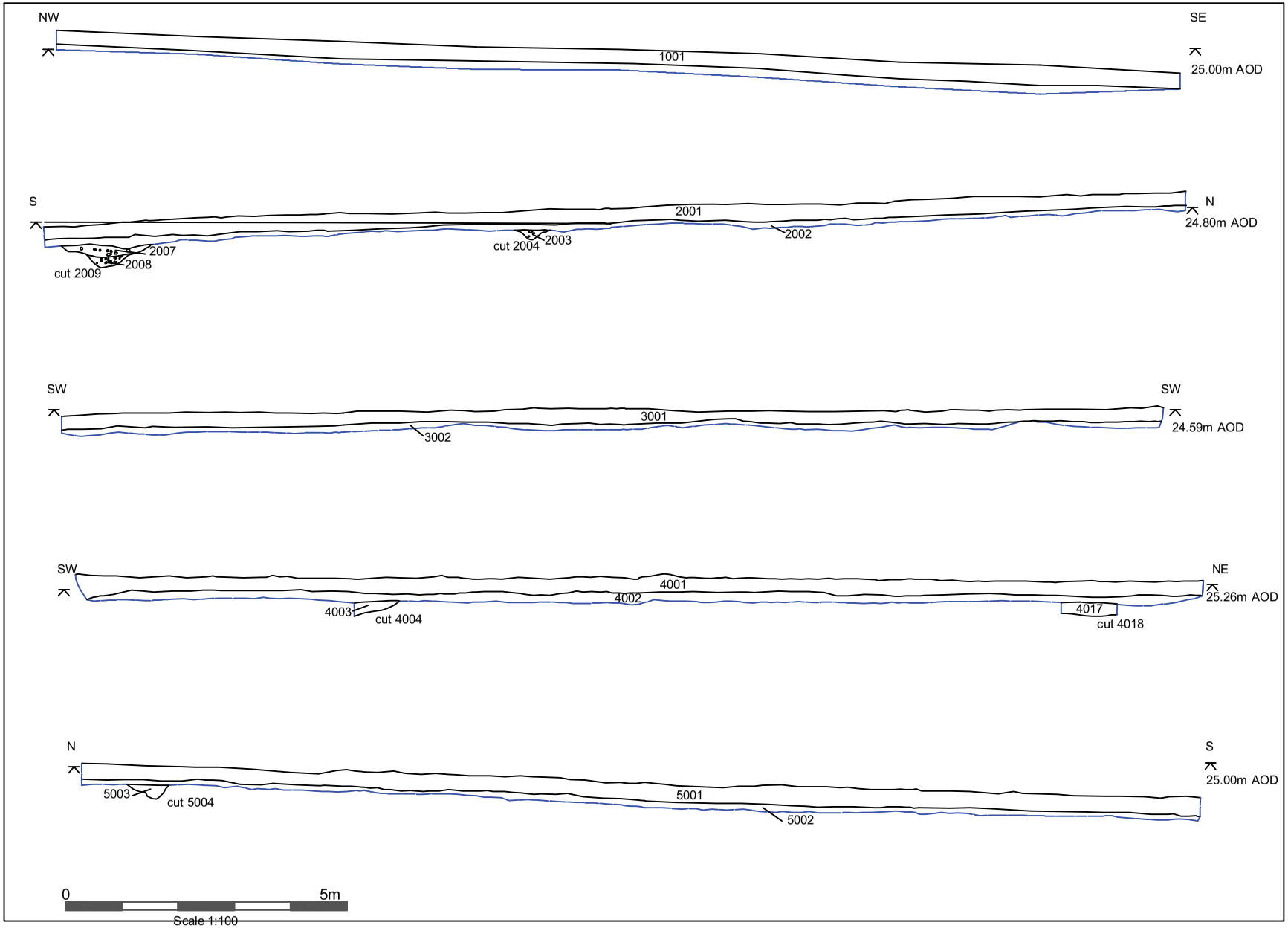

Figure 6. Evaluation Trenches 1, 2, 3, 4 and 5 Sections

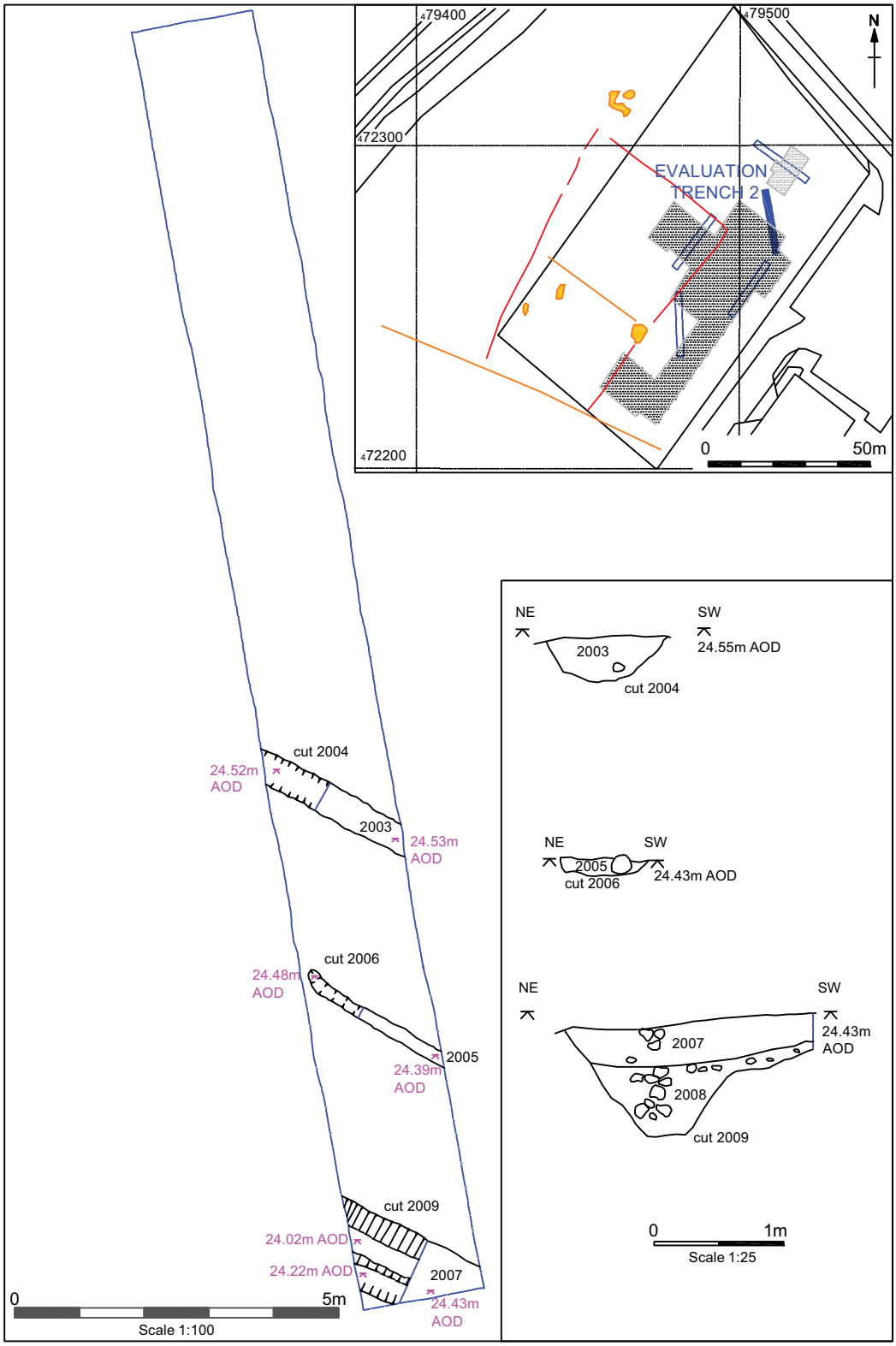

Figure 7. Evaluation Trench 2 Plan and Sections

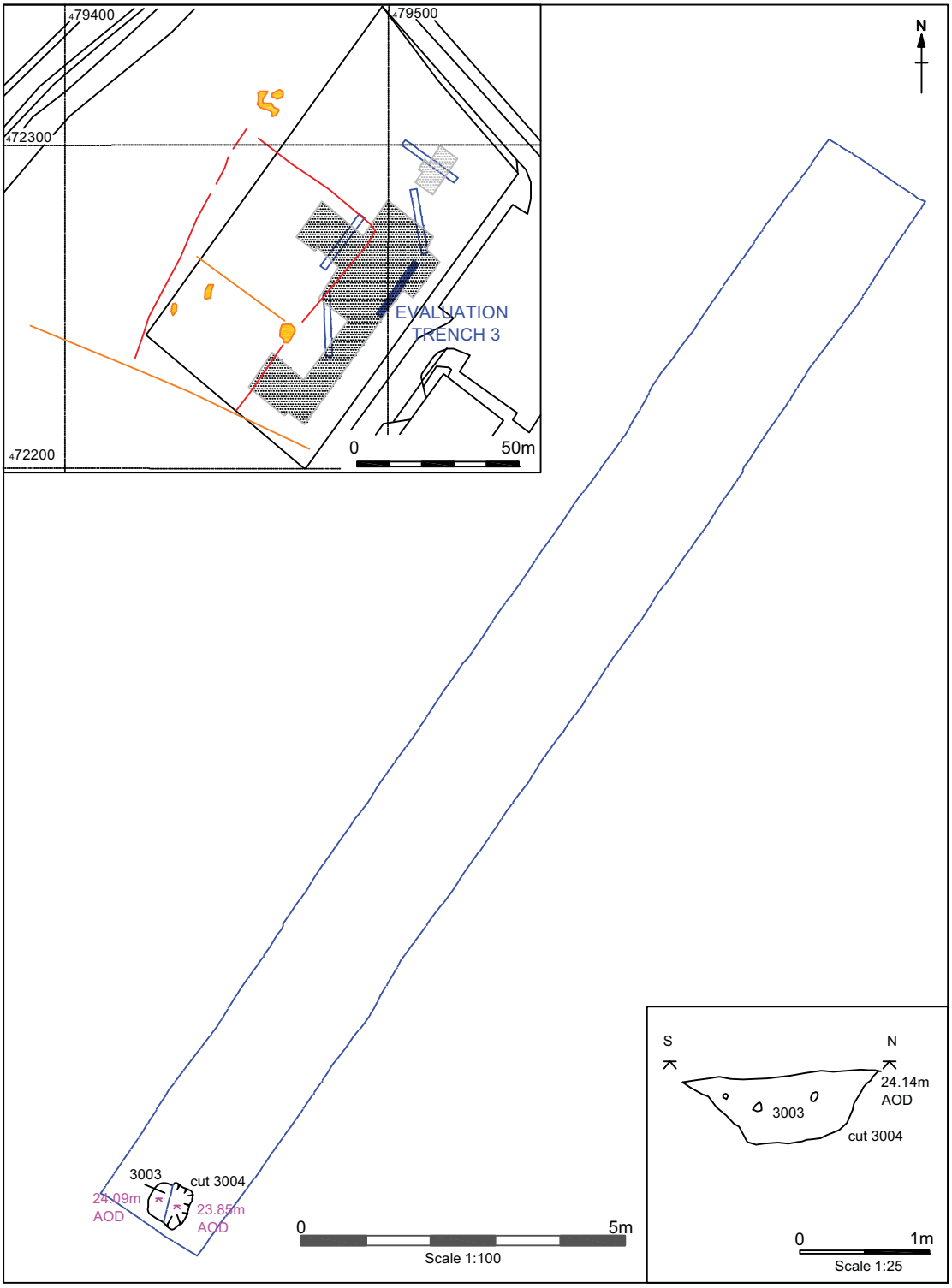

Figure 8. Evaluation Trench 3 Plan and Sections

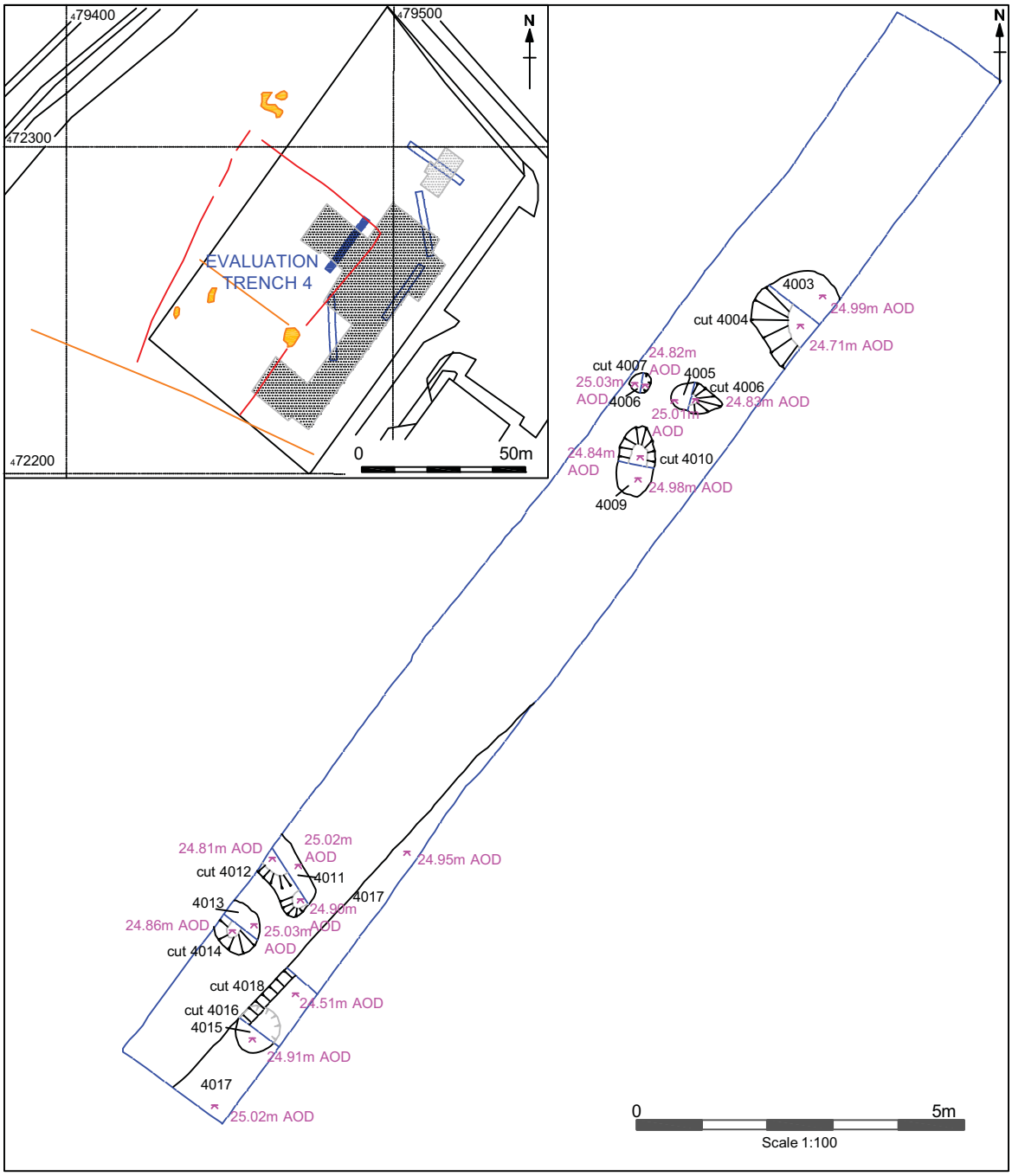

Figure 9. Evaluation Trench 4 Plan

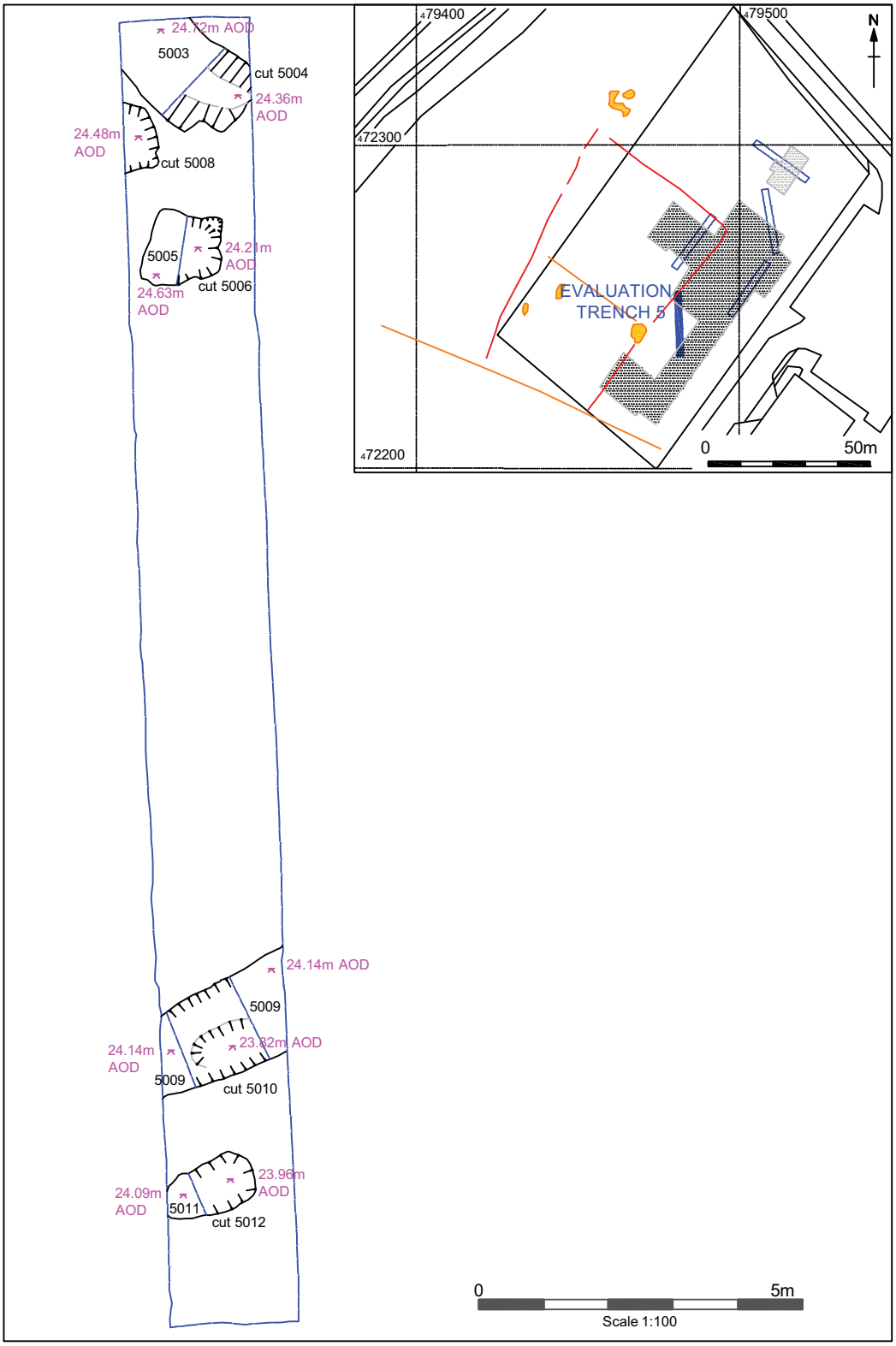

Figure 10. Evaluation Trench 5 Plan

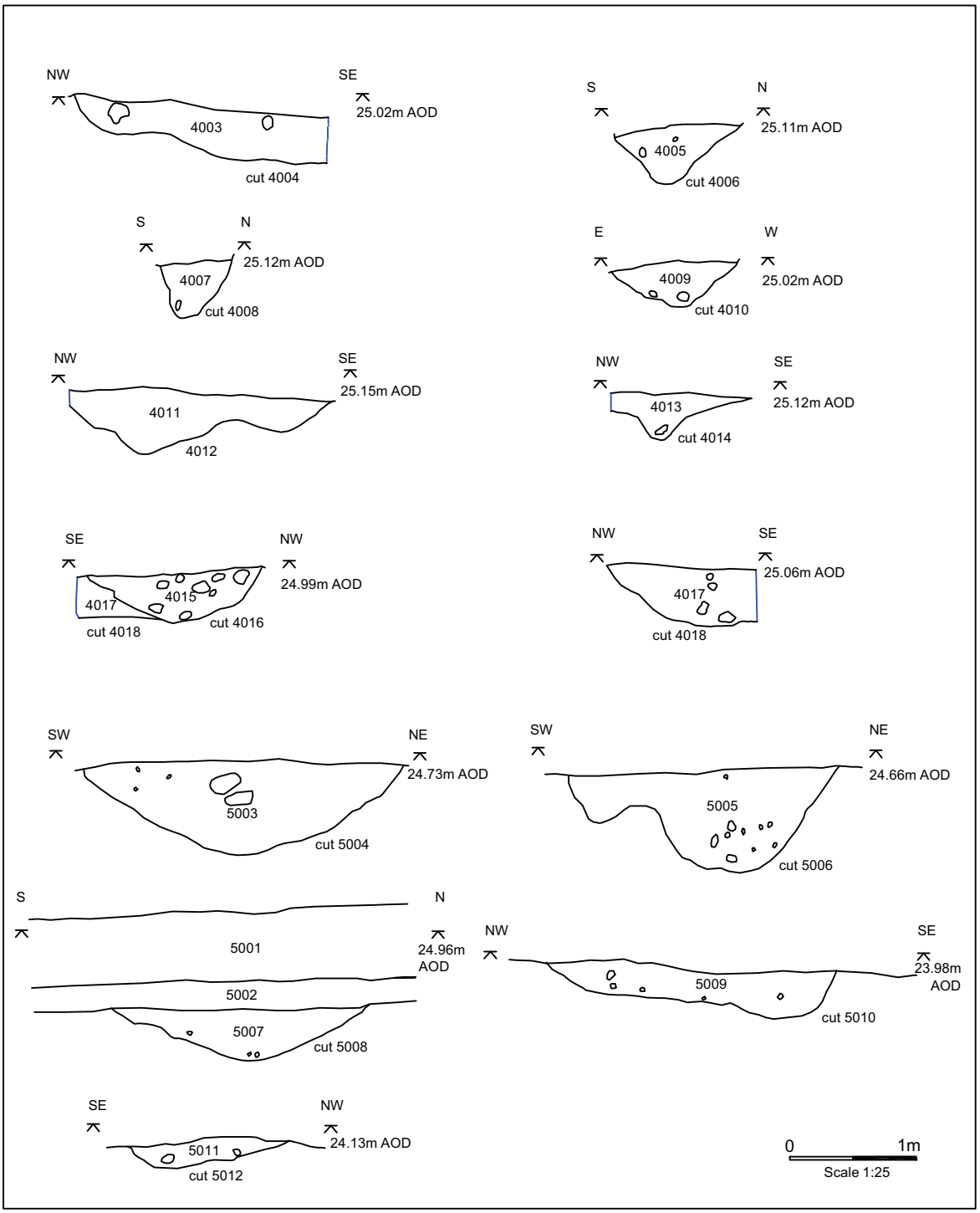

Figure 11. Evaluation Trenches 4 and 5 Sections

Plate 1. Evaluation Trench 1. Facing North-west.

Plate 2. Evaluation Trench 1.. Facing South-east.

Plate 3. Evaluation Trench 2. Facing South.

Plate 4. Evaluation Trench 2. Facing North.

Plate 5. Linear Feature 2004. Facing North-west.

Plate 6. Linear Feature 2006. Facing North-west.

Plate 7. Ditch Segment 2009. Facing West.

Plate 8. Evaluation Trench 3. Facing South-west.

Plate 9. Evaluation Trench 3. Facing North-east.

Plate 10. Pit 3004. Facing West.

Plate 11. Evaluation Trench 4. Facing North-east.

Plate 12. Evaluation Trench 4. Facing South-west.

Plate 13. Pit 4004. Facing North-east.

Plate 14. Postholes 4006 and 4008. Facing West.

Plate 15. Pit 4010. Facing North.

Plate 16. Pit 4012. Facing North-east.

Plate 17. Pit 4014. Facing North-east.

Plate 18. Pit 4016. Facing South-west.

Plate 19. Ditch Segment 4018. Facing North-east.

Plate 20. Evaluation Trench 5. Facing South.

Plate 21. Evaluation Trench 5. Facing North.

Plate 22. Ditch Segment 5004. Facing North-west.

Plate 23. Pit 5006. Facing North-west.

Plate 24. Pit 5008. Facing North-west.

Plate 25. Linear Feature Segment 5010. Facing South.

Plate 26. Linear Feature Segment 5012. Facing South.

APPENDIX 1

Context Listing

Land to the south-east of Old Malton Road, Old Malton, North Yorkshire
Site Code: 5.44.2012

Evaluation Trench 1

Context	Type	Description
1001	Deposit	Topsoil - dark grey brown silty sandy clay loam

Evaluation Trench 2

Context	Type	Description
2001	Deposit	Topsoil - dark grey brown silty sandy clay loam
2002	Deposit	Subsoil - brownb clay silty sand
2003	Deposit	Fill of Linear Feature 2004 - brown clay silt with occasional limestone fragments
2004	Cut	Small ditch/Linear feature
2005	Deposit	Fill of Linear Feature 2006 - yellowish brown clay silt with occasional limestone fragments
2006	Cut	Linear Feature
2007	Deposit	Upper fill of Ditch 2009 - dark yellowish brown slightly clay silt with occasional limestine fragment
2008	Deposit	Primary fill of Ditch 2009 0 dark ywllowish brown sandy silt with limestone gravel and cobble inclusions
2009	Cut	Linear Ditch

Evaluation Trench 3

Context	Type	Description
3001	Deposit	Topsoil - dark grey brown silty sandy clay loam
3002	Deposit	Subsoil - brownb clay silty sand
3003	Deposit	Fill of Pit 3004 - brown slightly sandy clay with occasional limestone fragments
3004	Deposit	Pit

Evaluation Trench 4

Context	Type	Description
4001	Deposit	Topsoil - dark grey brown silty sandy clay loam
4002	Deposit	Subsoil - brownb clay silty sand
4003	Deposit	Fill of Pit 4004 - brown sandy clay with occasional limestone fragments
4004	Cut	Pit
4005	Deposit	Fill of Posthole 4006 - brown slightly sandy clay with occasional limestone fragments
4006	Cut	Posthole
4007	Deposit	Fill pf Posthole 4008 - brown slightly sandy clay with occasional limestone fragments
4008	Cut	Posthole
4009	Deposit	Fill of Pit 4010 - brown slightly sandy clay with occasional limestone fragments
4010	Cut	Pit

APPENDIX 2

Finds Catalogue

Land to the south-east of Old Malton Road, Old Malton, North Yorkshire
Site Code: 5.44.2012

Trench 2

Context	Type	Total	Description	Weight	Spot date
2003	Pottery	2	1 body sherd, ?Iron Age fabric 1 small body sherd, Oxidised Coarseware (Roman)	0.005kg	Iron Age/Roman
2007	Pottery	2	1 body sherd, Greyware 1 body sherd, Oxidised Coarseware (Roman)	0.010kg	2nd-3rd century AD
2007	Animal Bone	4	4 unidentified fragments	0.025kg	

Trench 3

Context	Type	Total	Description	Weight	Spot date
3003	Animal Bone	1	1 unidentified fragment	0.040kg	

Trench 4

Context	Type	Total	Description	Weight	Spot date
4002	Pottery	7	2 sherds, Samian (Central Gaul) Bowls? (1 rim and 1 base) 2 rim sherds, Greyware jars 3 body sherds, Oxidised coarseware (Roman)	0.100kg	2nd century
4011	Flint	1	Flint blade (Neolothic/Bronze Age)		Neolithic/EBA
4015	Pottery	1	1 body sherd Iron Age Fabric?	0.005kg	Iron Age/Roman
4015	Daub	1	1 fragment	0.010kg	
4015	Cinder	1	1 fragment	0.005kg	
4017	Pottery	1	1 body sherd Iron Age Fabric?	0.050kg	Iron Age/Roman
4017	Animal Bone	8	7 bone fragments and 1 tooth	0.100kg	
4017	Flint	1	1 flint flake (burnt with signs of wear)	0.005kg	Neolithic/EBA

Trench 5

Context	Type	Total	Description	Weight	Spot date
5002	Pottery	2	1 base sherd, Oxidised coarseware jar (Roman) 1 body sherd, Humber ware (Medieval)	0.005kg	14th-15th century
5003	Pottery	1	1 body sherd Iron Age Fabric?	0.005kg	Iron Age/Roman
5009	Pottery	1	1 body sherd, Greyware (Roman)	0.005kg	2nd-3rd century AD
5009	Animal Bone	3	2 cremated/burnt unidentified fragments 1 unidentified fragment	0.010kg	
5009	Shell	1	1 Limpet shell	0.005kg	
5011	Animal Bone	5	5 unidentified fragments	0.010kg	

4011	Deposit	Fill of Pit 4012 - brown sandy clay
4012	Cut	Pit
4013	Deposit	Fill of Pit 4014 - brown sandy clay with flint and gritty inclusions
4014	Cut	Pit
4015	Deposit	Fill of Pit 4016 - sign sof burning in brown slightly sandy clay with ash and charcoal
4016	Cut	Pit
4017	Deposit	Fill of Linear Feature 4018 - grey brown slightly sandy clay with limestone frgaments and cobbles
4018	Cut	Linear Feature/Ditch

Evaluation Trench 5

Context	**Type**	**Description**
5001	Deposit	Topsoil - dark grey brown silty sandy clay loam
5002	Deposit	Subsoil - brownb clay silty sand
5003	Deposit	Fill of feature 5004 - brown slightly clay silty sand with occasional limestone fragments
5004	Cut	Pit/Linear Feature
5005	Deposit	Fill of Pit 5006 - brown slightly clay silty sand with occasional limestone fragments
5006	Cut	Pit
5007	Deposit	Fill of natural feature? 5008 - orangy brown slightly clay with occasional limestine fragment
5008	Cut	Natural Feature?/Pit
5009	Deposit	Fill of linear feature 5010 - brown slightly clay silty sand with occasional limestone fragments and cobbles
5010	Cut	Shallow Linear Feature
5011	Deposit	Fill of linear feature 5012 - brown slightly clay silty sand with occasional limestone fragments
5012	Cut	Furrow - shallow linear feature

APPENDIX 3

Drawing Archive Listing

Land to the south-east of Old Malton Road, Old Malton, North Yorkshire
Site Code: 5.44.2012

Drawing No	Scale	Type	Description
1	1:10	Section	Evaluation Trench 4 - South Facing Section Pit 4004
2	1:10	Section	Evaluation Trench 4 - North-east Facing Section Posthole 4006
3	1:10	Section	Evaluation Trench 4 - North-west Facing Section Posthole
4	1:10	Section	Evaluation Trench 4 - North-east Facing Section Posthole 4008
5	1:20	Plan	Evaluation Trench 2 - Southern half
6	1:10	Section	Evaluation Trench 2 - North-west Facing Section Linear 2006
7	1:10	Section	Evaluation Trench 2 - North-west Facing Section Linear 2004
8	1:10	Section	Evaluation Trench 4 - South-west Facing Section Pit 4012
9	1:10	Section	Evaluation Trench 4 - South Facing Section Pit 4014
10	1:10	Section	Evaluation Trench 2 - North-west Facomg Section Ditch 2009
11	1:10	Section	Evaluation Trench 4 - North Facing Section Pit 4016 and Ditch 4018
12	1:20	Section	Evaluation Trench 2 - East facing Section
13	1:10	Section	Evaluation Trench 4 - South Facing Section Ditch 4018
14	1:20	Plan	Evaluation Trench 4 (North)
15	1:20	Plan	Evaluation Trench 4 (South)
16	1:10	Section	Evaluation Trench 5 - South-east Facing Section Linear Feature 5004
17	1:10	Section	Evaluation Trench 5 - South-east Facing Section Pit 5006
18	1:10	Section	Evaluation Trench 5 - South-east Facing Section Feature 5008
19	1:10	Section	Evaluation Trench 5 - South-west Facing Section Linear Feature 5010
20	1:10	Section	Evaluation Trench 5 - North-east Facing Section Furrow 5012
21	1:20	Plan	Evaluation Trench 5 (North)
22	1:10	Plan	Evaluation Trench
23	1:20	Section	Evaluation Trench 4 West Facing Section
24	1:20	Plan	Evaluation Trench 5 (South)
25	1:10	Section	Evaluation Trench 3 - East Facing Section Pit 3004
26	1:20	Section	Evaluation Trench 3 - South-west Facing Section
27	1:20	Plan	Evaluation Trench 3 (West)

APPENDIX 4

Photographic Listing

Land to the south-east of Old Malton Road, Old Malton, North Yorkshire
Site Code: 5.44.2012

Digital Camera
Pentax WG-1 - 14 megapixel

No.	Folder	File Name	Description
1	212_0921	IMGP1379.jpg	Evaluation Trench 2: area after cleaning. Facing South.
2	212_0921	IMGP1380.jpg	Evaluation Trench 2: area after cleaning. Facing North
3	212_0921	IMGP1381.jpg	Evaluation Trench 2: Linear feature after cleaning. Facing West.
4	212_0921	IMGP1382.jpg	Evaluation Trench 3: after cleaning. Facing South-west
5	212_0921	IMGP1383.jpg	Evaluation Trench 3: after cleaning. Facing North-east
6	212_0921	IMGP1384.jpg	Evaluation Trench 1: after cleaning. Facing North-west
7	213_0926	IMGP1385.jpg	Evaluation Trench 5: after cleaning. Facing South.
8	213_0926	IMGP1386.jpg	Evaluation Trench 5: after cleaning. Facing North.
9	213_0926	IMGP1387.jpg	Evaluation Trench 5: after cleaning. Facing West.
10	213_0926	IMGP1388.jpg	Evaluation Trench 5: after cleaning. Facing North.
11	213_0926	IMGP1389.jpg	Evaluation Trench 5: after cleaning. Facing West.
12	213_0926	IMGP1390.jpg	Evaluation Trench 5: after cleaning. Facing North.
13	213_0926	IMGP1391.jpg	Evaluation Trench 5: after cleaning. Facing West.
14	213_0926	IMGP1392.jpg	Evaluation Trench 5: after cleaning. Facing West.
15	213_0926	IMGP1393.jpg	Evaluation Trench 4: after cleaning. Facing North-east
16	213_0926	IMGP1394.jpg	Evaluation Trench 4: after cleaning. Facing South-west.
17	213_0926	IMGP1395.jpg	Evaluation Trench 4: after cleaning. Facing South-west.
18	213_0926	IMGP1396.jpg	Evaluation Trench 1: after cleaning. Facing South-east.
19	213_0926	IMGP1397.jpg	Evaluation Trench 1: after cleaning. Facing North-west
20	213_0926	IMGP1398.jpg	Pit 4004. Facing East.
21	213_0926	IMGP1399.jpg	Pit 4004. Facing South-east.
22	214-0927	IMGP1400.jpg	Pit 4004. Facing North-east.
23	214-0927	IMGP1401.jpg	Linear Feature 2004. Facing North-east.
24	214-0927	IMGP1402.jpg	Linear Feature 2004. Facing South-west.
25	214-0927	IMGP1403.jpg	Posthole 4006. Facing South-west.
26	214-0927	IMGP1404.jpg	Posthole 4008. Facing South-west.
27	214-0927	IMGP1405.jpg	Postholes 4006 and 4008. Facing South-west.
28	214-0927	IMGP1406.jpg	Linear Feature 2006. Facing North-west.
29	214-0927	IMGP1407.jpg	Pit 4010. Facing North.
30	214-0927	IMGP1408.jpg	Linear feature 5004. Facing North-west.
31	214-0927	IMGP1409.jpg	Linear feature 5004. Facing North-west.
32	214-0927	IMGP1410.jpg	Linear feature 5004. Facing North.
33	215-0928	IMGP1411.jpg	Pit 4012. Facing North.
34	215-0928	IMGP1412.jpg	Pit 4012. Facing North-west.
35	215-0928	IMGP1413.jpg	Pit 5006. Facing North-west.
36	215-0928	IMGP1414.jpg	Pit 5006. Facing North-west.
37	215-0928	IMGP1415.jpg	Pit 4014. Facing North.
38	215-0928	IMGP1416.jpg	Pit 4014. Facing North.
39	215-0928	IMGP1417.jpg	Natural Feature 5008. Facing North-west.
40	215-0928	IMGP1418.jpg	Natural Feature 5008. Facing North-west.
41	215-0928	IMGP1419.jpg	Ditch 2009. Facing South-east.
42	215-0928	IMGP1420.jpg	Ditch 2009. Facing South-east.

43	215-0928	IMGP1421.jpg	Ditch 2009. Facing South-east.
44	215-0928	IMGP1422.jpg	Burnt Pit 4016. Facing South-east.
45	215-0928	IMGP1423.jpg	Burnt Pit 4016. Facing South-east.
46	215-0928	IMGP1424.jpg	Burnt Pit 4016. Facing South-east.
47	216-1001	IMGP1425.jpg	Ditch Segment 4018. Facing North-east.
48	216-1001	IMGP1426.jpg	Pit 4016 and Ditch Segment 4018. Facing South-west.
49	216-1001	IMGP1427.jpg	Linear Feature 5010. Facing North-west.
50	216-1001	IMGP1428.jpg	Linear Feature 5010. Facing North-west.
51	216-1001	IMGP1430.jpg	Linear Feature 5010. Facing South-east.
52	216-1001	IMGP1431.jpg	Linear Feature 5010. Facing South-east.
53	216-1001	IMGP1432.jpg	Linear Feature 5012. Facing North-west.
54	216-1001	IMGP1433.jpg	Linear Feature 5012. Facing North-west.
55	216-1001	IMGP1435.jpg	Pit 3004. Facing North-west
56	216-1001	IMGP1436.jpg	Pit 3004. Facing North-west
57	217-1002	IMGP1437.jpg	Trench 5 after excavation. Facing South.
58	217-1002	IMGP1438.jpg	Trench 5 after excavation. Facing North.
59	218-1003	IMGP1439.jpg	Trench 1 backfilled. Facing South-east.
60	218-1003	IMGP1440.jpg	Trench 2 backfilled. Facing South.
61	218-1003	IMGP1441.jpg	Trench 3 backfilled. Facing South-west.
62	218-1003	IMGP1442.jpg	Trench 5 backfilled. Facing West.
63	218-1003	IMGP1443.jpg	Trench 4 backfilled. Facing South.
64	218-1003	IMGP1444.jpg	Trench 4 backfilled. Facing South.

Jockey Rehabilitation Centre, Old Malton, North Yorkshire 5.44.2012
Carbonised Plant Macrofossils and Charcoal
Diane Alldritt

1: Introduction

Sixteen environmental sample flots from archaeological evaluation work in advance of construction of the Jockey Rehabilitation Centre, near Old Malton, North Yorkshire (MAP 5.44.2012) were analysed for carbonised plant remains and charcoal. Samples were examined from four Evaluation trenches, with a variety of features including pits, postholes, ditches and other linear anomalies excavated. Iron Age / Roman pottery was discovered in some of the features, whilst the finding of a Neolithic/Early Bronze Age flint from one of the pits suggested earlier activity may also have been taking place.

2: Methodology

Bulk environmental samples were processed by MAP using a Siraf-style water flotation system (French 1971). The flots were dried before examination under a low powered binocular microscope, and contained small amounts of charred material, including from <2.5ml to 15ml of cereal grain, wood charcoal and other burnt remains. Modern roots, occasional modern seeds and some non-marine mollusc (snail) shells were recorded in trace amounts of <2.5ml up to 5ml. All identified plant remains including charcoal were removed and bagged separately by type.

Wood charcoal was examined using a high powered Vickers M10 metallurgical microscope at magnifications up to x200. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

3: Results

Results are presented in table 1 and discussed below.

4: Discussion

The sixteen environmental samples taken from evaluation trenches at the Jockey Rehabilitation Centre, Old Malton produced some distinct concentrations of carbonised cereal grain and weed seeds located predominantly in pit and ditch features within Trench 4. Small amounts of wood charcoal and other remains were recorded from Trenches 2, 4 and 5. Snail shell was recorded in almost every sample and could be identified by an appropriate specialist. Coal fragments recovered from the samples were probably naturally occurring in the local geology.

Trench 2

Three samples taken from ditch and linear features in Trench 2 produced small trace amounts of wood charcoal and heather-type stems indicating some burning activity in the vicinity. Sample 4 (2003) contained a single very small fragment of *Quercus* (oak) charcoal, sample 11 (2007) a small heather-type stem, whilst sample 5 (2005) was sterile of identifiable remains. These remains are probably not that significant and could be wind blown from nearby burning activity. Upper ditch fill sample 11 (2007), consisted of scarce trace evidence for nearby burning activity in the form of a single fragment of heather-type stem.

Trench 3

A single sample from pit (3004) in trench 3, sample 16 (3003) contained one very poorly preserved indeterminate cereal grain. This could represent trace material from nearby cereal drying or cooking activity, or could be all that survives from a larger deposit.

Preservation of the grain was not particularly good, therefore it is likely to have been wind-blown or trampled.

Trench 4

Eight samples from Trench 4 produced mixed results with the main concentrations of material focused in pit fill (4015) and ditch / linear feature fill (4017).

Sample 1 (4003) from pit (4004) contained small amounts of wood charcoal, with both *Quercus* (oak) and *Corylus* (hazel) identified. A single *Triticum* sp. (wheat) was also present, but too poorly preserved to identify fully. Sample 6 (4009) from pit (4010), produced *Betula* (birch) charcoal, which may be suitable for radiocarbon dating.

Sample 12 (4015) from pit (4016) produced a very informative cereal-rich flot, consisting of abundant grain, some cereal chaff, and evidence for the use of peat or heathy turves for fuel. This deposit is most likely a deliberate dump of cereal processing waste from corn drying or other farming activity. The sample contained nicely preserved specimens of both *Triticum aestivum* (bread wheat) and *Triticum spelta* (spelt wheat), together with a number of spelt wheat glume bases and cereal stems, indicative of cereal processing occurring at the site. Field weeds such as *Chrysanthemum segetum* (corn marigold) and *Fallopia convolvulus* (black bindweed) probably arrived accidentally with the cereal harvest, and are indicative of agricultural land. A number of thick basal roots from heather plants suggested peat or heathy turves were being cut for fuel for use during cereal drying. The mixture of remains in this context could represent the sweepings or cleaning-out of a corn drier.

Ditch / linear feature sample 13 (4017) produced a similar assemblage to (4015), although in smaller amounts, suggesting the dumping of cereal waste in the feature. A number of *Triticum* sp. (wheat) grains were recovered, probably including both spelt and bread types, but too vesicular to identify accurately. Rhizomes and a *Danthonia*

decumbens (heathgrass) seed from this sample also add weight to the argument for peat or turf being cut for fuel.

Samples 2 (4003), 3 (4007) and 8 (4011) were sterile of identifiable carbonised remains. Sample 8 (4011) was from the pit which produced the Neolithic flint, but unfortunately no plant remains were recovered.

Trench 5

Four samples from Trench 5 produced some slightly larger quantities of wood charcoal than obtained from the other trenches, in addition to occasional cereal grain and other detritus.

Sample 7 (5003) taken from linear feature (5004), contained a nicely preserved specimen of *Triticum aestivum* (bread wheat) together with a small concentration of *Quercus* (oak) charcoal consisting of fragments up to 1.5cm in size. This may represent a discrete deposit of cooking or cereal drying waste deliberately disposed of in the feature. The finding of bread wheat would be concurrent with the Iron Age / Roman date indicated from the pottery finds in this context, and as with the remains from Trench 4 could certainly be extended well into the Roman period.

Sample 9 (5005) from pit (5006) produced very tiny trace slivers of wood charcoal which could not be identified, together with a single indeterminate cereal grain, probably trace indications of activity.

Samples 14 (5009) and 15 (5011) both taken from furrow features, consisted of extremely small fragments of *Quercus* (oak) charcoal, together with a single rhizome in (5009) and as single heather-type stem in (5011). These are probably not that significant but suggest burning taking place nearby.

5: Conclusion

The evaluation samples from Jockey Rehabilitation Centre, Old Malton generally produced small amounts of carbonised plant remains, but with some larger concentrations of nicely preserved material recovered from Trenches 4 and 5.

The cereal grain assemblage indicated an agricultural economy mainly reliant upon wheat, with both bread and spelt types identified. This was concurrent with the Iron Age / Roman date for the remains suggested by the pottery, and may suggest a date further into the Roman period for these activities.

Charcoal identification suggested the use of oak, hazel and birch for fuel, with the majority of oak found in Trench 5. Fuel from heath and peat land seems to have been used for cereal processing activity, rather than using wood, in context (4015). The birch from (4009) could be used for radiocarbon dating if required, the hazel from (4003) was possibly too small, whilst some of the cereal grain from (4015) or (5003) would be ideal.

Overall the evaluation samples produced a good assemblage of carbonised plant remains, with the key material focused in Trenches 4 and 5. These indicated a high potential for future work at the site to produce good quantities of nicely preserved material.

References

French, D. H. 1971 An Experiment in Water Sieving. *Anatolian Studies 21* 59-64.

Schweingruber, F. H. 1990 *Anatomy of European Woods*. Paul Haupt Publishers Berne and Stuttgart.

Stace, C. 1997 *New Flora of the British Isles*. 2nd Edition Cambridge University Press.

Zohary, D. and Hopf, M. 2000 *Domestication of Plants in the Old World*. 3rd Edition Oxford University Press.

Table 1: Jockey Rehabilitation Centre, Old Malton, North Yorkshire: Carbonised Plant Remains, Charcoal and Other Material:

Jockey Rehabilitation Centre	**Sample**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Old Malton, North Yorkshire	**Context**	4003	4003	4007	2003	2005	4009	5003	4011	5005	4013	2007	4015	4017	5009	5011	3003
MAP 5.44.2012	**Feature**	pit Tr4	pit Tr4	posthole Tr4	linear Tr2	linear Tr2	pit Tr4	linear Tr5	pit Tr4	pit Tr5	pit Tr4	ditch Tr2	pit Tr4	ditch Tr4	furrow Tr5	furrow Tr5	pit Tr3
	Total CV	2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	5ml	<2.5ml	<2.5ml	2.5ml	<2.5ml	15ml	5ml	5ml	2.5ml	<2.5ml
	Modern	<2.5ml	<2.5ml	<2.5ml	5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml	<2.5ml
Carbonised Cereal Grain and Chaff	**Common Name**																
Triticum aestivum	bread wheat							1					5				
Triticum spelta	spelt wheat												8				
Triticum sp.	wheat	1											12	10			
Triticum spelta glume bases	spelt wheat chaff												7				
Cerealia stems	cereal chaff												14				
Indeterminate cereal grain (+ embryo)										1			68	8			1
Charcoal																	
Quercus	oak	2 (<0.01g)			1 (<0.01g)			5 (0.34g)			1 (<0.01g)				1 (<0.01g)	2 (<0.01g)	
Corylus	hazel	1 (<0.01g)															
Betula	birch						1 (0.06g)										
Carbonised Wild Resources																	
Rhizomes														2 (0.01g)	1 (0.06g)		
Calluna / Ericales stems	heather											1 (<0.01g)	9 (0.25g)			1 (<0.01g)	
Bark															5+		
Carbonised Weeds																	
Fallopia convolvulus	black bindweed												1				
Vicia sp.	vetches												3				
Danthonia decumbens	heathgrass													1			
Small Poaceae	grass Family													1			
Chrysanthemum segetum	corn marigold												2				
Other Remains																	
Non-marine mollusc shell	snail shell	10+	5+	10+	5+	5+	10+	5+	5+	5+	5+		10+	5+	5+	5+	10+
Coal fragments			5+	5+	5+	5+	5+		10+		5+			3	5+	10+	
Modern seeds																1	

YORK ARCHAEOLOGICAL TRUST
CONSERVATION LABORATORIES

5.44.2012

Assessment of one small find for

MAP Archaeological Consultancy

Conservator: M Felter

17th October, 2012

INTRODUCTION

One box of finds was delivered to the York Archaeological Trust Conservation Laboratory on 18th October 2010 for assessment, comprising 1 copper alloy object.

This report aims to meet the requirements of MAP2 (English Heritage, 1991) to produce a stable site archive. This has involved X-radiography and an assessment of the condition, stability and packaging of the find. Standard YAT procedures were followed; The single object was assessed and X-rayed on one plate (X8075).

PROCEDURES

The metal find was X-rayed using standard Y.A.T. procedures and equipment and the plate was given a reference number in the YAT conservation laboratory series. The X-ray number was written on the find bag. The image on the radiograph was labelled with its small finds number. The plate was packaged in an archival paper pocket.

The find was examined under a binocular microscope at X20 magnification. The material identification was checked and observations made about the condition and stability of the finds, and recorded below.

X-ray	SF no	Context	Assessment
X8075	2	2007	Labelled 'Cu alloy object' 5 fragments of copper alloy folded strip in fair to poor condition. The majority of the surfaces are stable but the edges show signs of ongoing active corrosion in the form of bright green powdery corrosion products. There is no evidence of mineral preserved organic material in the interstices. The X-ray shows the metal core to be almost completely mineralised. **Recommendations: no further action.**

STATEMENT OF POTENTIAL

The object did not give any special indications of preservation, dating or evidence of technology, craft or industry.

RECOMMENDATIONS

No further work is necessary.

Packing and Long Term Storage

Packaging on arrival at the lab: The find has so far not been stored in a dry environment having been packed in a finds bag within a small plastic box.

Long-Term Storage: The metal finds should be stored in a desiccated environment at less than 15%RH which should stabilise the active corrosion and prevent further deterioration of the object. To that end a bag of fresh silica gel and a new indicator strip have been added. The desiccated environment will need to be maintained.

REFERENCE

English Heritage, Management of Archaeological Projects, 1991

Animal bones and shell by Jane Richardson

In total, 23 animal bone fragments and one limpet shell of probable Iron Age/Roman date were recovered from five contexts (Table 1). The bone fragments were typically fragmented and poorly preserved. Given the small assemblage, all fragments were rapidly scanned, but no digital archive of individual bones was created at this assessment stage.

Bones were assigned to taxa wherever possible, although lower-order categories were also used (e.g. cattle-size). Epiphyseal fusion and dental eruption and wear data were assessed. Bone condition and erosion were noted in order to assess bone preservation, while gnawing, burning and butchery marks were recorded to determine bone treatment. No measureable bones are present in the assemblage, and no pathological bones were noted.

The bones are fragmented and all display signs of surface erosion. Cattle and horse, and probably sheep/goat, are represented. Adult cattle are indicated by the presence of a single well-worn molar. No butchery marks were noted, perhaps due to the poor preservation of bone surfaces.

Given the very small sample size, no further analysis of this assemblage is recommended.

Table 1. Animal bone fragments and shells by context

Context	Species	Element	Quantity
2007	Horse	Femur barrel (eroded)	1
	Sheep-sized mammal	Vertebral fragment	4
3003	Cattle	Distal humerus (fused, eroded)	1
4017	Cattle	Maxillary tooth (well worn)	1
	Cattle	Atlas (eroded)	1
	Cattle	Pelvis (pubis) fragment (eroded)	1
	Cattle-sized mammal	Long bone fragment (eroded)	5
	Cattle-sized mammal	Rib fragment (eroded)	1
5009	Sheep-sized mammal	Long bone fragment (two burnt, eroded)	3
	Limpet	Shell	1
5011	Cattle-sized mammal	Long bone fragment (eroded)	5
Total			24

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EVALUATION

Jockey Rehabilitation Centre
Old Malton Road
Malton
North Yorkshire
SE 7947 7227

Prepared by MAP Archaeological Practice Ltd

Acting on instruction from Nick Silcock of Townscape Architects on behalf of the Injured Jockeys Fund.

August 2012

Jockey Rehabilitation Centre

Malton

North Yorkshire

SE 7947 7227

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EVALUATION

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WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EVALUATION

1. Summary

1.1 The Proposed Development site is for the erection of an Injured Jockeys Rehabilitation Centre and is 0.73 Hectares in size. This Written Scheme of Investigation has been prepared by MAP Archaeological Practice Ltd in advance of a Planning Application to evaluate the archaeological impact of the development by pre-determination Trial Trenching.

1.2 Accordingly, the Heritage and Environment Section of NYCC has advised the Local Planning Authority that a scheme of archaeological evaluation is undertaken at the site. The aim of this work is to establish the nature, location, extent and state of preservation of archaeological remains within the development area. The results of this work will enable the archaeological impact of the development to be fully appreciated and an appropriate design mitigation, and/or further archaeological work, to be agreed to preserve archaeological deposits either *in situ*, or by record. This scheme of investigation has been prepared to define the scope of this Archaeological Evaluation by MAP Archaeological Practice Ltd, acting on instruction from Nick Silcock of Townscape Architects on behalf of the Injured Jockeys Fund.

2. Purpose

2.1 This written scheme of investigation represents a summary of the broad archaeological requirements to enable an assessment of the impact of development proposals upon the archaeological resource. This is in accordance with the recommendations of the National Planning Policy Framework (March 2012).

3. Location and Description (SE 7947 7227)

3.1 The proposed development is located between Malton Rugby Club and Old Malton Road and is currently an agricultural field which has just been harvested.

4. Historical and Archaeological Background

4.1 The proposed development lies within an area of considerable archaeological interest, with high archaeological potential for the survival of remains dating from the Iron Age and Romano-British periods.

4.2 The close proximity of the Roman Fort of Derventio, a Scheduled Ancient Monument (NY 285) and the known trapezoidal enclosure, identified as a cropmark and by geophysical survey (GSB 1992 & WYAS 2004) located in the proposed development area are evidence of the sites archaeological potential.

4.3 A Roman Road is known to have issued from the eastern gate of the fort heading on a north-easterly bearing towards the area now occupied by the remains of Old Malton Priory, its route therefore extending across the Rugby Club to the south-east of the proposed development. Roman roads often became the preferred locations for graveyards as, under Roman law, burials were not permitted within settlement boundaries. There is therefore archaeological potential along the route of the road.

4.4 In 1994, an Archaeological Watching Brief was undertaken during the topsoil and subsoil stripping in advance of the construction of the clubhouse and pitches. An Iron Age Hut Circle, a length of Roman Road, three substantial Roman Buildings and five cremation burials were uncovered and recorded (MAP 1994). These buildings probably relate to an extension of the Vicus Roman Settlement attached to the Roman Fort at Orchard Fields located 50mm south west of the Rugby Club. The Roman Fort and the Vicus are Scheduled Ancient Monuments

4.5 The place-name *Malton* (*Maltune* in 1086) is the Scandinavianised form of Old English *Middeltun*, meaning 'the middle farm' (Ekwall, 1936). *Old* Malton distinguishes this settlement from the 12th century 'new borough' of Malton that is situated 2km to the south-west.

4.6 Old Malton existed as a pre-conquest settlement, the Domesday Survey mentioning two Anglo-Saxon owners: Ulf, who had one manor (1 carucate held at the time of Domeday Book by the Archbishop of York), and Otfrida (1.5 carucates held by Earl Hugh in 1086). There were two other manors at the time of the Domesday Survey, both belonging directly to the king. The largest of these manors consisted of the 8 carucates held by Siward and Thorkil, along with land for 2 ploughs, 1.5 of which were in desmesne; also 7 villains and 5 bordars with 3.5 ploughs. A church and site of a mill are also mentioned. This manor had been worth 20*s*. in 1066, but had declined to 10*s.* at the Domesday Survey. The other manor was held by Kolbrand, and consisted of 3 carucates, with land for 1.5 ploughs, 1 villain with half a plough, and 16 acres of meadow 1 league long and 1 league broad. Together this had been worth 10*s*. In 1066, but had halved in value by 1086.

4.7 Two pieces of carved stone recorded in the churchyard may represent traces of the pre-conquest church (Robinson 1978, Numbers 143-144).

4.8 The Priory was founded in *circa* 1150 by Eustace fitzJohn and belonged to the Gilbertine Order. The present parish church comprises the western part of the nave and two-thirds of the original façade of the Priory church. The Priory also owned land and houses at Old Malton, the Lascelles family granting their estate in the village to the Priory in the 13th century (Hudleston, 1962). The Priory is a Grade I Listed Building and a Scheduled Ancient Monument. The dissolution of Old Malton Priory was conducted by the Henry VIII's Commissioners in December 1539.

5. Objectives

5.1 The objectives of the archaeological evaluation work within the proposed development area are:

1. to determine by means of trial trenching, the nature, depth, extent and state of preservation of any archaeological deposits to be affected by the development proposals. Trial trenches of sufficient size and depth to provide this information will be excavated, and archaeological deposits will be explicitly related to depths below existing surface and actual heights in relation to Ordnance Datum.

2. to prepare a report summarising the results of the work and assessing the archaeological implications of proposed development,

3. to prepare and submit a suitable archive to the appropriate museum.

6. Access, Safety and Monitoring

6.1 Access to the site will be arranged through the commissioning body.

6.2 It is the archaeological contractor's responsibility to ensure that Health and Safety requirements are fulfilled.

6.3 The project will be monitored by the Senior Archaeologist, North Yorkshire County Council, to whom written documentation should be sent before the start of the trial trenching confirming: a) the date of commencement, b) the names of all finds and archaeological science specialists likely to be used in the evaluation, and c) notification to the proposed archive repository of the nature of the works and opportunity to monitor the works.

6.4 Where appropriate, the advice of the Regional Archaeological Science Advisor for Archaeological Science (Yorkshire & The Humber region) at English Heritage will be called upon.

6.5 It is the archaeological contractor's responsibility to ensure that monitoring takes place by arranging monitoring points as follows:

1. a preliminary meeting or discussion at the commencement of the contract to agree the locations of the proposed trial trenches.

2. progress meeting(s) during the fieldwork phase at appropriate points in the work schedule, to be agreed.

3. a meeting during the post-fieldwork phase to discuss the draft report and archive before completion.

6.6 It is the responsibility of the archaeological contractor to ensure that any significant results are brought to the attention of the Archaeologist,

North Yorkshire County Council and the commissioning body as soon as is practically possible.

7. Brief

7.1 The proposed area of actual ground disturbance is 0.73 Hectares in area and 200m^2 of trial trenching is proposed. Five trenches are proposed to determine the nature, depth, extent and state of preservation of archaeological deposits in particular the trapezoidal enclosure at the site. It is proposed that the trenches should be 2m x 20m in size and positioned in the headland areas along the edge of the site to avoid crop damage. The project should be undertaken in a manner consistent with the guidance of MAP2 (English Heritage, 1991) and professional standards and guidance (IFA, 1999).

7.2 In case of query as to the extent of investigation, a site meeting shall be convened with the Senior Archaeologist, North Yorkshire County Council.

7.3 In the area of each trench, overburden such as crop, turf, topsoil, made ground, rubble or other superficial fill materials will be removed by machine using a back-acting excavator, which will be fitted with a toothless or ditching bucket. Mechanical excavation equipment shall be used judiciously, under archaeological supervision down to the top of archaeological deposits, or the natural subsoil (C Horizon or soil parent material), whichever appears first. Hand-excavation of all archaeological deposits will be necessary. Topsoil will be kept separate from subsoil or fill materials. The need for, and any methods of, reinstatement will be agreed with the commissioning body in advance of submission of tenders.

7.4 Once overburden/topsoil has been removed, the trenches will be cleaned and an assessment made of any archaeological remains on the site. Using the information and artefacts collected to this stage, all

features and deposits should be assessed as to their origin or function, probable date, and importance for further recording. Features and layers identified as having potential for further recording should be excavated by hand, sampled, and recorded as set out below.

7.5 All deposits should be fully recorded on standard context sheets, photographs and conventionally scaled plans and sections. Each trench area should be recorded to show the horizontal and vertical distribution of contexts. Normally, all four sides of a trench should be recorded in section. Fewer sections can be recorded only if there is a substantial similarity of stratification across the trench. The elevation of the underlying natural subsoil where encountered will be recorded. The limits of excavation will be shown in all plans and sections, including where these limits are coterminous with context boundaries.

7.5 Should any human remains be encountered, these will be left *in situ* following the determination of the extent of the remains and grave cut(s).

7.6 Metal detecting, including the scanning of topsoil and spoil heaps, will only be permitted subject to archaeological supervision and recording so that metal finds are properly located, identified, and conserved. All metal detection should be carried out following the Treasure Act 1996 Code of Practice.

7.7 Due attention will be paid to artefact retrieval and conservation, ancient technology, dating of deposits and the assessment of potential for the scientific analysis of soil, sediments, biological remains, ceramics and stone. All specialists (both those employed in-house and those sub-contracted) should be named in project documentation, their prior agreement obtained before the fieldwork commences and opportunity afforded for them to visit the fieldwork in progress.

7.8 Finds should be appropriately packaged and stored under optimum conditions, as detailed in *First Aid for Finds* (Watkinson & Neal, 1998).

7.9 The character, information content and stratigraphic relationships of features and deposits should be determined and a running section along the excavation area, from highest to lowest point, should be recorded to show the vertical distribution of layers. All linear features, such as ditches, should have their shape, character, and depth determined by hand excavation of sections. A minimum sample of 20% of each linear feature of less than 5m in length and a minimum sample of 10% of each linear feature greater than 5m in length (each section will be not less than 1m wide) should be excavated. All junctions of linear features should have their stratigraphic relationships determined, if necessary using box sections. A 100% sample of all stake-holes should be excavated, and all pits, post-holes and other discrete features should be half-sectioned by hand to record a minimum of 50% of their fills, and their shape. Any other unknown or enigmatic features should be investigated similarly. Large pits, post-holes or deposits of over 1.5m diameter should be excavated sufficiently to define their extent and to achieve the objectives of the investigation, but should not be less than 25%. All intersections should be investigated to determine the relationship(s) between features.

7.10 Scientific investigations should be undertaken in a manner consistent with the English Heritage best-practice guidelines (2003).

7.11 Where there is evidence for industrial activity, macroscopic technological residues (or a sample of them) should be collected by hand. Separate samples (*c*. 10ml) should be collected for micro-slags hammer-scale and spherical droplets). In these instances, the guidance of English Heritage (2001) and Jones (*ed* 2006) should be followed.

7.12 Samples should be collected for scientific dating (radiocarbon, dendrochronology, luminescence dating, archaeomagnetism and/or

other techniques as appropriate), following an outline strategy presented to the Senior Archaeologist, NYCC.

7.13 Where appropriate, buried soils and sediment sequences should be inspected and recorded on site by a recognised geoarchaeologist. Samples may be collected for analysis of chemistry, magnetic susceptibility, particle size, micromorphology and/or other techniques as appropriate, following an outline strategy presented to the Senior Archaeologist, NYCC, and in consultation with the geoarchaeologist. The guidance of Canti (1996) and English Heritage (2011) should be followed.

7.14 Deposits should be sampled for retrieval and analysis of all biological remains. The sampling strategy should include a reasoned justification for selection of deposits for sampling, and should be developed in collaboration with a recognised bioarchaeologist. Sampling methods should follow the guidance of the Association for Environmental Archaeology (1995) and English Heritage (2011). Flotation samples and samples taken for coarse-mesh sieving from dry deposits should be processed at the time of the fieldwork wherever possible, partly to permit variation of sampling strategies if necessary, but also because processing at a later stage could cause delays.

7.15 All securely stratified deposits should be sampled, from a range of representative features, including pit and ditch fills, postholes, floor deposits, ring gullies and other negative features. Positive features should also be sampled. Sampling should also be considered for those features where dating by other methods (for example pottery and artefacts) is uncertain. Bulk samples should be collected from contexts containing a high density of bones. Spot finds of other material should be recovered where applicable.

7.16 Coarse sieved samples for the recovery of animal bones and other artefact/ecofact categories should be 100 litres plus. Flotation samples,

for the recovery of charred plant remains, charcoal, small animal bones and mineralised plant remains, should be between 40 and 60 litres in size, although this will be dependent upon the volume of the context. Entire contexts should be sampled if the volume is low. Whenever possible, coarse sieved samples (wet or dry) and flotation samples should be processed during fieldwork to allow the continuous reassessment and refinement of sampling strategies. Samples from waterlogged and anoxic deposits, which might contain plant macros and entomological evidence, taken for General Biological Analysis (GBA), should normally be 40 litres in size. The English Heritage guidance should be consulted for details of sample size for other specialist samples, which may be required. Allowance should be made for a site visit from the contractor's environmental specialists/consultants where appropriate.

7.17 The specialists that MAP Archaeological Practice Ltd. use are as follows:

Conservation	Ian Panter	YAT	01904 612529
Prehistoric Pottery	Terry Manby		01430 873147
Roman Pottery	Paula Ware	MAP	01653 697752
Pre-conquest Pottery	Mark Stephens	MAP	01653 697752
Medieval Pottery	Mark Stephens	MAP	01653 697752
Post Medieval Pottery	Mark Stephens	MAP	01653 697752
Clay Tobacco Pipe	Mark Stephens	MAP	01653 697752
CBM	Mark Stephens		01653 697752

Animal Bone	Anne Finney	MAP	01653 697752
Small Finds	Hilary Cool		0116 981 9065
Leather	Ian Carlisle		
Textile	Penelope Walton Rogers	Textile Research in Archaeology	01904 634585
Slag/Hearths	Bradford University		**01274 383 5131**
Flint	Pete Makey		01377 253695
Environmental Sampling	Diane Alldritt		
Human Remains	Malin Holst	York Osteology Ltd	01904 737509

7.18 Upon completion of archaeological field recording work, an appropriate programme of analysis and publication of the results of the work should be completed. Post excavation assessment of material should be undertaken in accordance with the guidance of MAP2 (English Heritage, 1991).

7.19 Where appropriate, the advice of the English Heritage Regional Advisor for Archaeological Science, Yorkshire Region may be called upon to monitor the archaeological science components of the project.

8. Archive

8.1 A field archive should be compiled consisting of all primary written documents, plans, sections and photographs should be produced and cross-referenced. Archive deposition should be undertaken with reference to the County Council's *Guidelines on the Transfer and Deposition of Archaeological Archives.*

8.2 The archaeological contractor should liase with an appropriate museum to establish the detailed requirements of the museum and

discuss archive transfer in advance of fieldwork commencing. The relevant museum curator should be afforded to visit the site and discuss the project results. In this instance, the Malton Museum is suggested.

8.3 The archiving of any digital data arising from the project should be undertaken in a manner consistent with professional standards and guidance (Richards & Robinson, 2000). The archaeological contractor should liaise with an appropriate digital archive repository to establish their requirements and discuss the transfer of the digital archive.

8.4 The archaeological contractor should also liaise with the HER Officer, North Yorkshire County Council, to make arrangements for digital information arising from the project to be submitted to the North Yorkshire Historic Environment Record for HER enhancement purposes. The North Yorkshire HER is not an appropriate repository for digital archives arising from projects.

9. Report

9.1 A summary report shall be produced following the County Council's guidance on reporting: Reporting Check-List.

9.2 All excavated areas should be accurately mapped with respect to nearby buildings and roads.

9.3 At least five copies of the report should be produced and submitted to the commissioning body, North Yorkshire County Council Heritage Section HER, the Local Planning Authority, the museum accepting the archive and the English Heritage Regional Advisor for Archaeological Science.

9.4 Copyright in the documentation prepared by the archaeological contractor and specialist sub-contractors should be the subject of an

additional licence in favour of the museum accepting the archive and North Yorkshire County Council to use such documentation for their statutory educational and museum service functions, and to provide copies to third parties as an incidental to such functions.

9.5 Under the Environmental Information Regulations 2005 (EIR), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'. Requests for sensitive information are subject to a public interest test, and if this is met, then the information has to be disclosed. The archaeological contractor should inform the client of EIR requirements, and ensure that any information disclosure issues are resolved before completion of the work. Intellectual property rights are not affected by the EIR.

9.6 If the archaeological fieldwork produces results of sufficient significance to merit publication in their own right, allowance should be made for the preparation and publication of a summary in a local journal, such as the *Yorkshire Archaeological Journal*. This should comprise, as a minimum, a brief note on the results and a summary of the material held within the site archive, and its location.

9.7 Upon completion of the work, the archaeological contractor should make their work accessible to the wider research community by submitting digital data and copies of reports online to OASIS (http://ads.ahds.ac.uk/project/oasis/). Submission of data to OASIS does not discharge the planning requirements for the archaeological contractor to notify the Senior Archaeologist, NYCC of the details of the work and to provide the Historic Environment Record (HER) with a report on the work.

10. References

IFA	2001	Standard and Guidance for Archaeological Desk Based Assessments. Institute of Field Archaeologists.
Mackney, D et al	1983	Soils of England and Wales. Sheet 1. Northern England. Soils of England and Wales.
Page, W. (ed.)	1968	The Victoria History of the County of York North Riding. Volume 2. Institute of Historical Research. University of London.
Pevsner, N.	1981	The Buildings of England. Yorkshire The North Riding. Penguin.
Smith, A.H.	1979	The Placenames of the North Riding of Yorkshire. English Placename Society. Vol. 5. Cambridge University Press
Archaeological Services, WYAS	1994	Old Malton Road, Malton Geophysical Survey

11. Additional Information

This brief was completed on 24th August 2012 by:

Paula Ware/Sophie Langford
MAP Archaeological Practice Ltd

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Email: sophie@map-arch-ltd.demon.co.uk

APPENDIX 1

Conservation Strategy By Ian Panter of York Archaeological Trust

Artefacts from all categories and all periods will be recovered as a matter of routine during the excavation. When retrieved from the ground finds will be kept in a finds tray or appropriate bags in accordance with **First Aid for Finds**. Where necessary, a conservator may be required to recover fragile finds from the ground depending upon circumstances.

If waterlogged conditions are encountered a wide range of organic materials may be recovered, including wood, leather and textiles. Advice will be sought from a conservator to discuss optimum storage requirements before any attempt is made to retrieve organic finds and structural timbers from the ground.

After the completion of the fieldwork stage, a conservation assessment will be undertaken which will include the X-radiography of all the ironwork (after initial screening to separate obviously modern debris), and a selection of the non-ferrous finds (including all coins). A sample of slag may also be X-rayed to assist with identification and interpretation. Wet-packed material, including glass, bone and leather will be stabilised and consolidated to ensure their long-term preservation. All finds will be stored in optimum conditions in accordance with **First Aid for Finds** and **Guidelines for the Preparation of Excavation Archives for Long-Term Storage** (Walker, 1990).

Waterlogged wood, including structural elements will be assessed following the English Heritage guidelines, **Waterlogged wood: sampling, conservation and curation of structural wood** (Brunning 1996). The assessment will include species identification, technological examination and potential for dating.

The conservation assessment report will include statements on condition, stability and potential for further investigation (with conservation costs) for all material groups. The conservation report will be included in the updated project design prepared for the analysis stage of the project.

References

Brunning, R. 1996
Waterlogged wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood. English Heritage, London.

Walker, K. 1990 *Guidelines for the preparation of excavation archives for long-term storage*, Archaeology Section of the United Kingdom Institute for Conservation.

Watkinson, D. and Neal, V. 1998 First Aid for Finds *(3rd edition), RESCUE and the Archaeology Section of the United Kingdom Institute for Conservation.*

APPENDIX 2

Environmental Strategy By Diane Alldrit

The on-site environmental sampling strategy will systematically seek to recover a representative sample of botanical, molluscan (both terrestrial and aquatic), avian and mammalian evidence from the full range of contexts encountered during the excavation. This will enable, at the assessment stage, the possibility for radiocarbon dating material to be obtained, and for an initial analysis of the economic and environmental potential of the site. In order to achieve this, a bulk sample (BS, Dobney *et al* 1992) comprising an optimum size of 28litre of sediment (where possible) should be taken from **every stratigraphically secure and archaeologically significant context**. In practice it may not always be possible to obtain 28l of sediment from certain features during the assessment stage, for instance from partially excavated pits or post-holes, in which case a single bucket sample, c.10 to 14litre should be taken at the site supervisors discretion. Deposits of mixed origin, for instance topsoil, wall fills and obvious areas of modern contamination, should be avoided where possible, as these will contain intrusive material and not provide secure radiocarbon dates.

All buckets and other sampling equipment must be clean and free of adherent soil in order to prevent cross-contamination between samples. If dry soil is to be stored for any length of time it should be kept in cool, dry conditions, and away from strong light sources. However, it is preferable to process samples as soon as possible after excavation.

Bulk soil samples shall be processed using an Ankara-type water flotation machine (French 1971) for the recovery of carbonised plant remains and charcoal. The flotation tank should contain a >1mm mesh for collection of the retent or 'residue' portion of the sample (which may contain pottery, lithics and animal / bird bone, in addition to the heavier fragments of charcoal which do not float). The 'flot' portion of the sample, which may include carbonised seeds, cereal grain, charcoal and sometimes mollusc shell, should be captured using a nest of >1mm and >300micron Endicot sieves. Flotation equipment, including sieves, meshes, brushes and so forth must be meticulously cleaned between samples in order to prevent contamination of potential radiocarbon dating material. All material resulting from flotation will be dried prior to microscopic examination. Flotation is not suitable for the recovery of pollen or for processing waterlogged samples, which shall be discussed below.

Where there is potential for waterlogged preservation, shown for instance by the presence of wood and other organic or wet material, then a 5 to 10litre size sample should be taken (GBA sample, Dobney *et al* 1992). This material is to be retained for later processing using laboratory methods to enable the recovery of waterlogged plant material and insects. For assessment purposes a 1litre sub-sample of the organic sediment from each potential waterlogged sample shall be processed using laboratory wash-over methods, and once processed **kept wet**. All waterlogged samples awaiting processing should be kept damp, preferably stored in plastic sealable tubs, and in cool

conditions. Where large waterlogged timbers are recovered these should be stored under refrigerated conditions and an appropriate conservator consulted.

If sediment suitable for pollen analysis is encountered, for instance rich organic peaty deposits, or deep ditch sections with organic preservation, the archaeobotanical specialist is to be consulted prior to any sampling taking place. These deposits would require sampling with large kubiena tins and require the specialist to be on-site. Pollen analysis, even at assessment level, would subsequently impose a considerable cost implication should it be carried out.

The specialist is available to provide consultation and advice on the environmental sampling strategy throughout the course of the excavation and during post-excavation processing if required.

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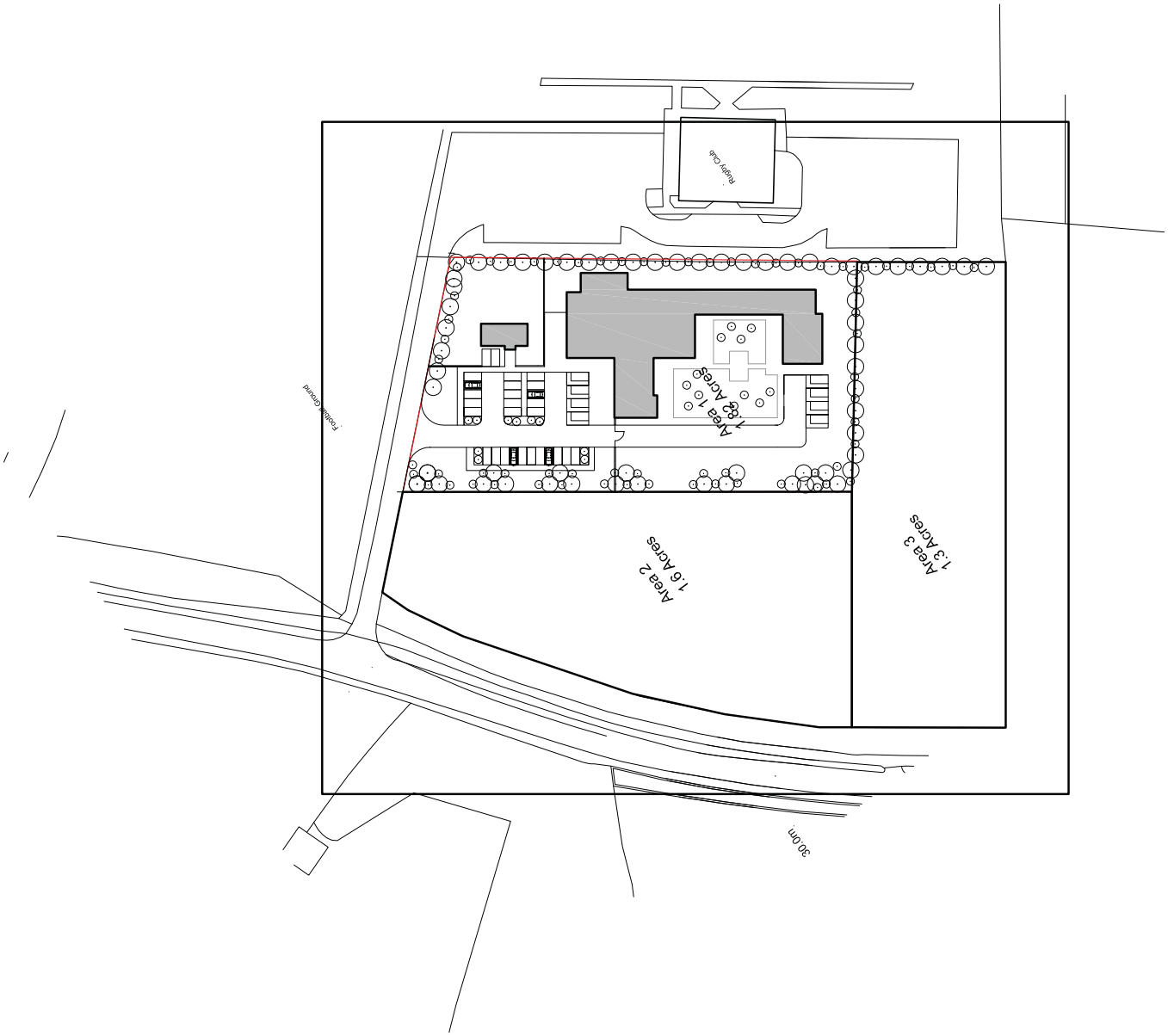

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townscape ARCHITECTS

No.	Revision/Issue	Date

Jack Berry House

The Injured Jockeys Fund

PRELIMINARY

Project	Drawing No
0479	K025
Date: 16.08.12	Sheet: INDICATIVE SITE PLAN
Scale: 1:1250 @ A3	Revision

Fig. 6. Greyscale plot of gradiometer data: Central section

Mitigation Strategy for
Injured Jockey's Rehabilitation Centre
Old Malton Road
Malton
North Yorkshire
SE 7947 7227

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EXCAVATION

Prepared by MAP Archaeological Practice Ltd

Acting on instruction from Nick Silcock of Townscape Architects on behalf of the Injured Jockeys Fund.

MAP Archaeological Practice Ltd

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OCTOBER 2012

Injured Jockey's Rehabilitation Centre
Old Malton Road
Malton
North Yorkshire
SE 7947 7227

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EXCAVATION

1. Summary

1.1 Archaeological Excavation is to take place in the area of the footprint and associated services in connection with the proposed Injured Jockey's Rehibilitaion Centre, Old Malton Road, Malton, North Yorkshire.

1.2 The archaeological work should take the form of an open area excavation at the site. The aim of this work is to preserve by record the archaeological remains within the development area. This scheme of investigation has been prepared to define the scope of this archaeological work by MAP Archaeological Practice Ltd, acting on instruction from Nick Silcock of Townscape Architects on behalf of the Injured Jockeys Fund.

2. Purpose

2.1 This written scheme of investigation represents a summary of the broad archaeological requirements to enable the preservation by record of the archaeological resource. This is in accordance with National Planning Policy Framework (March 2012).

3. Location and Description

3.1 The proposed development is located between Malton Rugby Club and Old Malton Road and is currently an agricultural field which has just been harvested.

4. Archaeological and Historical Background

4.1 The proposed development lies within an area of considerable archaeological interest, with high archaeological potential for the survival of remains dating from the Iron Age and Romano-British periods.

4.2 The close proximity of the Roman Fort of Derventio, a Scheduled Ancient Monument (NY 285) and the known trapezoidal enclosure, identified as a cropmark and by geophysical survey (GSB 1992 & WYAS 2004) located in the proposed development area are evidence of the sites archaeological potential.

4.3 A Roman Road is known to have issued from the eastern gate of the fort heading on a north-easterly bearing towards the area now occupied by the remains of Old Malton Priory, its route therefore extending across the Rugby Club to the south-east of the proposed development. Roman roads often became the preferred locations for graveyards as, under Roman law, burials were not permitted within settlement boundaries. There is therefore archaeological potential along the route of the road.

4.4 In 1994, an Archaeological Watching Brief was undertaken during the topsoil and subsoil stripping in advance of the construction of the clubhouse and pitches. An Iron Age Hut Circle, a length of Roman Road, three substantial Roman Buildings and five cremation burials were uncovered and recorded (MAP 1994). These buildings probably relate to an extension of the Vicus Roman Settlement attached to the Roman Fort at Orchard Fields located 50mm south west of the Rugby Club. The Roman Fort and the Vicus are Scheduled Ancient Monuments

4.5 The place-name *Malton* (*Maltune* in 1086) is the Scandinavianised form of Old English *Middeltun*, meaning ‘the middle farm’ (Ekwall, 1936). *Old*

Malton distinguishes this settlement from the 12th century 'new borough' of Malton that is situated 2km to the south-west.

4.6 Old Malton existed as a pre-conquest settlement, the Domesday Survey mentioning two Anglo-Saxon owners: Ulf, who had one manor (1 carucate held at the time of Domeday Book by the Archbishop of York), and Otfrida (1.5 carucates held by Earl Hugh in 1086). There were two other manors at the time of the Domesday Survey, both belonging directly to the king. The largest of these manors consisted of the 8 carucates held by Siward and Thorkil, along with land for 2 ploughs, 1.5 of which were in desmesne; also 7 villains and 5 bordars with 3.5 ploughs. A church and site of a mill are also mentioned. This manor had been worth 20*s*. in 1066, but had declined to 10*s.* at the Domesday Survey. The other manor was held by Kolbrand, and consisted of 3 carucates, with land for 1.5 ploughs, 1 villain with half a plough, and 16 acres of meadow 1 league long and 1 league broad. Together this had been worth 10*s*. In 1066, but had halved in value by 1086.

4.7 Two pieces of carved stone recorded in the churchyard may represent traces of the pre-conquest church (Robinson 1978, Numbers 143-144).

4.8 The Priory was founded in *circa* 1150 by Eustace fitzJohn and belonged to the Gilbertine Order. The present parish church comprises the western part of the nave and two-thirds of the original façade of the Priory church. The Priory also owned land and houses at Old Malton, the Lascelles family granting their estate in the village to the Priory in the 13th century (Hudleston, 1962). The Priory is a Grade I Listed Building and a Scheduled Ancient Monument. The dissolution of Old Malton Priory was conducted by the Henry VIII's Commissioners in December 1539.

4.9 A Geophysical Survey undertaken on the site by West Yorkshire Archaeology Service in March 2004 noted an archaeological anomaly

interpreted as an enclosure which was previously identified from aerial photograph.

4.10 In October 2012 an Archaeological Evaluation was undertaken on the site and whilst features dating to the Iron Age/Romano/British period were located they have been assessed as of local significance. It is unlikely that any nationally important archaeological remains are located on the site to prevent development but further archaeological mitigation will be required in advance of construction.

5. Objectives

5.1 The objectives of the archaeological work are to:

1. to preserve by record by means of Archaeological Excavation the character, extent and nature of the archaeological remains within the development area,

2. to locate, recover, identify, assess and conserve (as appropriate) any archaeological artefacts exposed during the course of the excavation,

3. where appropriate, to undertake a post-excavation assessment after completion of fieldwork and site archive to assess the potential for further analysis and publication, and to undertake such analysis and publication as appropriate,

4. to prepare and submit a suitable archive to the appropriate museum.

6. Access, Safety and Monitoring

6.1 Access to the site should be arranged through the commissioning body.

6.2 It is the archaeological contractor's responsibility to ensure that Health and Safety requirements are fulfilled. Necessary precautions should be taken near underground services and overhead lines. A risk assessment should be provided to the commissioning body before the commencement of works.

6.3 The project will be monitored by the Historic Environment Team, NYCC, to whom written documentation should be sent ten days before the start of the excavation including:

1. the date of commencement,
2. an opportunity to monitor the works.

6.4 Where appropriate, the advice of the English Heritage Regional Advisor for Archaeological Science, (Yorkshire and Humber Region) may be called upon to monitor the archaeological science components of the project. Archaeological contractors may wish to contact him to discuss the science components of the project before submission of tenders.

6.5 It is the archaeological contractor's responsibility to ensure that monitoring takes place by arranging monitoring points as follows:

1. a preliminary meeting or discussion at the commencement of the contract.
2. progress meeting(s) during the fieldwork phase at appropriate points in the work schedule, to be agreed.
3. a meeting during the post-fieldwork phase to discuss the draft report and archive before completion.

6.6 It is the responsibility of the archaeological contractor to ensure that any significant results are brought to the attention of the Historic Environment Team, NYCC and the commissioning body as soon as is practically possible. This is particularly important where there is any likelihood of contingency arrangements being required.

7. Brief

7.1 The Written Scheme of Works for excavation concerns the area of the footprint and associated serviced, within which archaeological deposits will be preserved by record through archaeological excavation. The project should be undertaken in a manner consistent with the guidance of MAP2 (English Heritage, 1991) and professional standards and guidance (IFA, 2001).

7.2 All deposits will be fully recorded on standard context sheets, photographs and conventionally-scaled plans and sections. The excavation area will be recorded to show the horizontal and vertical distribution of contexts. The elevation of the underlying natural subsoil where encountered will be recorded. The limits of excavation will be shown in all plans and sections, including where these limits are coterminous with context boundaries.

7.4 Overburden such as turf, topsoil, made ground, rubble or other superficial fill materials will be removed by machine using a 360 tracked excavator fitted with a toothless, ditching bucket. Mechanical excavation equipment shall be used judiciously, under archaeological supervision down to the top of archaeological deposits, or the natural subsoil, whichever appears first. Bulldozers or wheeled scraper buckets will not be used to remove overburden above archaeological deposits. Thereafter, hand-excavation of archaeological deposits will be carried out, except where machine excavation will be used to provide information on the character of large intrusions such as clay extraction pits. The need for, and any methods of, reinstatement will be agreed with the commissioning body in advance of the excavation.

7.5 Should any human remains be present, these will be excavated and exhumed in accordance with current legislation and public health guidance.

7.6 Metal detecting, including the scanning of topsoil and spoil heaps, will only be permitted subject to archaeological supervision and recording so that metal finds are properly located, identified, and conserved. All metal detection should be carried out following the Treasure Act 1996 Code of Practice.

7.7 Due attention will be paid to artefact retrieval and conservation, ancient technology, dating of deposits and the assessment of potential for the scientific analysis of soil, sediments, biological remains, ceramics and stone. All specialists (both those employed in-house and those sub-contracted) should be named in project documentation, their prior agreement obtained before the fieldwork commences and opportunity afforded for them to visit the fieldwork in progress.

7.8 Finds should be appropriately packaged and stored under optimum conditions, as detailed in *First Aid for Finds* (Watkinson & Neal, 1998).

7.9 The character, information content and stratigraphic relationships of features and deposits should be determined. All linear features, such as ditches, should have their shape, character, and depth determined by hand excavation of sections. A minimum sample of 20% of each linear feature of less than 5m in length and a minimum sample of 10% of each linear feature greater than 5m in length (each section will be not less than 1m wide) should be excavated. All junctions of linear features should have their stratigraphic relationships determined, if necessary using box sections. A 100% sample of all stake-holes should be excavated, and all pits, post-holes and other discrete features should be half-sectioned by hand to record a minimum of 50% of their fills, and their shape. Any other unknown or enigmatic features should be investigated similarly. Large pits, post-holes or deposits of over 1.5m diameter should be excavated sufficiently to define their extent and to achieve the objectives of the investigation, but should not be less than 25%. All intersections should be investigated to determine the relationship(s) between features.

7.10 Scientific investigations should be undertaken in a manner consistent with the English Heritage best-practice guidelines (2003).

7.11 Where there is evidence for industrial activity, macroscopic technological residues (or a sample of them) should be collected by hand. Separate samples (*c*. 10ml) should be collected for micro-slags hammer-scale and spherical droplets). In these instances, the guidance of English Heritage (2001) and Jones (*ed* 2006) should be followed.

7.12 Samples should be collected for scientific dating (radiocarbon, dendrochronology, luminescence dating, archaeomagnetism and/or other techniques as appropriate), following an outline strategy presented to the Historic Environment Team, NYCC.

7.13 Where appropriate, buried soils and sediment sequences should be inspected and recorded on site by a recognised geoarchaeologist. Samples may be collected for analysis of chemistry, magnetic susceptibility, particle size, micromorphology and/or other techniques as appropriate, following an outline strategy presented to the Historic Environment Team, NYCC, and in consultation with the geoarchaeologist. The guidance of Canti (1996) and English Heritage (2011) should be followed.

7.14 All securely stratified deposits should be sampled for retrieval and analysis of all biological remains. Sampling methods should follow the guidance of the Association for Environmental Archaeology (1995) and English Heritage (2011).

7.15 Coarse sieved samples for the recovery of animal bones and other artefact/ecofact categories should be 100 litres plus. Flotation samples, for the recovery of charred plant remains, charcoal, small animal bones and mineralised plant remains, should be between 40 and 60 litres in size, although this may depend upon the volume of the

context. Entire contexts should be sampled if the volume is low. Whenever possible, coarse sieved (wet or dry) and flotation samples should be processed during fieldwork to allow the continuous reassessment and refinement of sampling strategies. Samples from waterlogged and anoxic deposits, which might contain plant macros and entomological evidence, taken for General Biological Analysis (GBA), should normally be 20 litres in size.

7.16 The English Heritage guidance should be consulted for details of sample size for other specialist samples, which may be required. Allowance should be made for a site visit from the contractor's environmental specialists/consultants, where appropriate.

7.17 The specialists that MAP Archaeological Practice Ltd use are as follows:

Conservation	Ian Panter	YAT	01904 663036
Prehistoric Pottery	Terry Manby		01430 873147
Roman Pottery	Paula Ware	MAP	01653 697752
Pre-conquest Pottery	Mark Stephens	MAP	01653 697752
Medieval Pottery	Mark Stephens	MAP	01653 697752
Post Medieval Pottery	Mark Stephens	MAP	01653 697752
Clay Tobacco Pipe	Mark Stephens	MAP	01653 697752
CBM	S.Garside – Neville		01904 621339
Animal Bone		WYAS	0113 3837517
Small Finds	Hilary Cool		0116 9819065
Leather	Ian Carlisle	YAT	01904 663000
Textile	Penelope Walton Rogers	Textile Research in Archaeology	01904 634585
Slag/Hearths	Rod Mackenzie		0114 235 2028
Flint	Pete Makey		01377 253695
Environmental Sampling		Diane Alldritt	0141 649 877

Human Remains	Malin Holst	York Osteology Ltd	01904 737509
Radiocarbon/C14 Dating		SUERAC	0141 270136
Dendrochronology		Sheffield University	0114 2220123
Archaeomagnetic	Mark Noel	Geoquest Associates	01624819364

7.20 Upon completion of archaeological field recording work, an appropriate programme of analysis and publication of the results of the work should be completed. Post excavation assessment of material should be undertaken in accordance with the guidance of MAP2 (English Heritage, 1991).

7.21 Where appropriate, the advice of the English Heritage Archaeological Regional Science Advisor (Yorkshire and The Humber Region) may be called upon to monitor the archaeological science components of the project.

8. Post-Excavation Assessment

8.1 Upon completion of archaeological fieldwork, where appropriate, a post-excavation assessment should be undertaken and an assessment report produced in accordance with the guidance of MAP2 (English Heritage 1991). The assessment report should summarise the evidence recovered and should consider its potential for further analysis, review the programme of archaeological science, update the project design as necessary and provide costings for the post-excavation analysis stage of work, with proposals for the production of a final report and/or publication. The site assessment report should include reports on all aspects of Archaeological Science investigated, and include assessment of their suitability for analysis, so as to inform the updated project design.

8.2 Assessment of artefacts should include x-radiography of all iron objects, (after initial screening to separate obviously modern debris),

and a selection of non-ferrous artefacts (including all coins and a sample of any industrial debris relating to metallurgy) (Jones, 2006). An assessment of all excavated material should be undertaken by conservators and finds researchers in collaboration. Where necessary, active stabilisation/consolidation will be carried out, to ensure long term survival of the material, but with due consideration to possible future investigations. Once assessed, all material should be packed and stored in optimum conditions, as described in Watkinson and Neal (1998).

8.3 Assessment of any technological residues should be undertaken. Processing of all samples collected for biological assessment, or sub-samples of them, should be completed. Assessment will include recording the preservation state, density and significance of material retrieved, to inform up-dated project designs. Methods presented in English Heritage (2011) should be followed. Unprocessed sub-samples should be stored in conditions specified by the appropriate specialists.

8.4 Samples collected for geoarchaeological assessment should be processed as deemed necessary by the specialist, particularly where storage of unprocessed samples is thought likely to result in deterioration. Appropriate assessment should be undertaken (see Canti 1996, English Heritage 2011). Animal bone assemblages, or sub-samples of them, should be assessed by a recognised specialist (English Heritage 2011). Assessment of human remains should be undertaken by a recognised specialist (English Heritage 2004).

9. Analysis

9.1 Within a time agreed with the Historic Environment Team, NYCC, a timetable for post-excavation work should be produced, following consultation, (including team meetings for larger-scale sites), with all specialists involved in the project. Agreement of timetables should be made in writing with external specialists.

9.2 Where appropriate, a detailed and cost-effective strategy for scientific dating should be prepared, in consultation with appropriate specialists. Samples for dating should be submitted to promptly, and prior agreement should be made with the laboratory on turn-around time and report production.

9.3 All artefacts should be conserved and stored in accordance with Watkinson and Neal (1998). Investigative conservation should be undertaken on those objects selected during the assessment phase, with the aim of maximising information whilst minimising intervention. Where necessary, active stabilisation/consolidation will be carried out, to ensure long-term survival of the material, but with due consideration to possible future investigations. Proposals for ultimate storage should follow Walker (1990).

9.4 Appropriate analysis of technological residues should be undertaken, as outlined in English Heritage (2001). Samples or sub-samples collected for all types of biological and geoarchaeological analysis should be processed, and material retrieved analysed by recognised specialists. Any unprocessed sub-samples should be stored in conditions specified by the specialists, or a reasoned discard policy should be developed (English Heritage 2011).

9.5 Analysis of animal bones should be undertaken by a recognised specialist, as specified in the updated project design (English Heritage 2002). Analysis of human remains should be undertaken by a recognised specialist, as specified in the updated project design.

10. Archive

10.1 A field archive should be compiled consisting of all primary written documents, plans, sections and photographs should be produced and cross-referenced. Archive deposition should be undertaken with reference to the County Council's *Guidelines on the Transfer and Deposition of Archaeological Archives.*

10.2 The archaeological contractor should liaise with the relevant museum curator over the deposition of the archive. The relevant museum curator should be afforded to visit the site and discuss the project results. In this instance, Malton Museum is suggested.

10.3 The archiving of any digital data arising from the project should be undertaken in a manner consistent with professional standards and guidance (Richards & Robinson 2000) The archaeological contractor should liaise with an appropriate digital archive repository to establish their requirements and discuss the transfer of the digital archive.

10.4 The archaeological contractor should also liaise with the HER Officer, North Yorkshire County Council, to make arrangements for the digital information arising from the project to be submitted to the North Yorkshire Historic Environment Record for HER enhancement purposes. The North Yorkshire HER is not an appropriate repository for digital archives arising from projects.

11. Report

11.1 A summary report shall be produced following the County Council's guidance on reporting: Reporting Check-List.

11.2 All excavated areas should be accurately mapped with respect to nearby buildings and roads.

11.3 At least five copies of the report should be produced and submitted to the commissioning body, North Yorkshire County Council Heritage Section HER, the Local Planning Authority, the museum accepting the archive, English Heritage Regional Advisor for Archaeological Science.

11.4 Copyright in the documentation prepared by the archaeological contractor and specialist sub-contractors should be the subject of an

additional licence in favour of the museum accepting the archive and North Yorkshire County Council to use such documentation for their statutory educational and museum service functions, and to provide copies to third parties as an incidental to such functions.

11.5 Under the Environmental Information Regulations 2005 (EIR), information submitted to the HER becomes publicly accessible, except where disclosure might lead to environmental damage, and reports cannot be embargoed as 'confidential' or 'commercially sensitive'. Requests for sensitive information are subject to a public interest test, and if this is met, then the information has to be disclosed. The archaeological contractor should inform the client of EIR requirements, and ensure that any information disclosure issues are resolved before completion of the work. Intellectual property rights are not affected by the EIR.

11.6 If the archaeological fieldwork produces results of sufficient significance to merit publication in their own right, allowance should be made for the preparation and publication of a summary in a local journal, such as the *Yorkshire Archaeological Journal*. This should comprise, as a minimum, a brief note on the results and a summary of the material held within the site archive, and its location.

11.7 Upon completion of the work, the archaeological contractor should make their work accessible to the wider research community by submitting digital data and copies of reports online to OASIS (http://ads.ahds.ac.uk/project/oasis/). Submission of data to OASIS does not discharge the planning requirements for the archaeological contractor to notify the Historic Environment Team, NYCC of the details of the work and to provide the Historic Environment Record (HER) with a report on the work.

11.8 Further information or clarification of any aspects of this brief may be obtained from:

MAP Archaeological Practice Ltd

Tel. 01653 697752

enquiries@map-arch-ltd.demon.co.uk

11.9 This written scheme of investigation is valid for a period of six months from the date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques. In addition, depending upon the final design of development, the methodology of the archaeological excavation may need to be modified accordingly.

12. References

Association for Environmental Archaeology	1995 Environmental Archaeology and Archaeological Evaluations, Recommendations Concerning the Component of Archaeological Evaluations in England. *Working Papers of the Association for Environmental Archaeology, Number 2*. http://www.envarch.net/publications/papers/evaluations.html
Canti, M	1996 Guidelines for carrying out Assessments in Geoarchaeology, *Ancient Monuments Laboratory Report 34/96*, English Heritage
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MAP Archaeological Practice Ltd — 2011 Proposed Injured Jockey's Rehibilitation Centre Archaeological Trial Trenching

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Watkinson, D & Neal, V — 1998 First Aid for Finds (3rd edition), RESCUE & the Archaeological Section of the United Kingdom Institute for Conservation.

West Yorkshire Archaeology Service — 2004 Geophysical Survey

APPENDIX 1

Conservation Strategy By Ian Panter of York Archaeological Trust

Artefacts from all categories and all periods will be recovered as a matter of routine during the excavation. When retrieved from the ground finds will be kept in a finds tray or appropriate bags in accordance with **First Aid for Finds**. Where necessary, a conservator may be required to recover fragile finds from the ground depending upon circumstances.

If waterlogged conditions are encountered a wide range of organic materials may be recovered, including wood, leather and textiles. Advice will be sought from a conservator to discuss optimum storage requirements before any attempt is made to retrieve organic finds and
structural timbers from the ground.

After the completion of the fieldwork stage, a conservation assessment will be undertaken which will include the X-radiography of all the ironwork (after initial screening to separate obviously modern debris), and a selection of the non-ferrous finds (including all coins). A sample of slag may also be X-rayed to assist with identification and interpretation. Wet-packed material, including glass, bone and leather will be stabilised and consolidated to ensure their long-term preservation. All finds will be stored in optimum conditions in accordance with **First Aid for Finds** and **Guidelines for the Preparation of Excavation Archives for Long-Term Storage** (Walker, 1990).

Waterlogged wood, including structural elements will be assessed following the English Heritage guidelines, **Waterlogged wood: sampling, conservation and curation of structural wood** (Brunning 1996). The assessment will include species identification, technological examination and potential for dating.

The conservation assessment report will include statements on condition, stability and potential for further investigation (with conservation costs) for all material groups. The conservation report will be included in the updated project design prepared for the analysis stage of the project.

References

Brunning, R. 1996
Waterlogged wood. Guidelines on the recording, sampling, conservation and curation of waterlogged wood. English Heritage, London.

Walker, K. 1990 *Guidelines for the preparation of excavation archives for long-term storage*, Archaeology Section of the United Kingdom Institute for Conservation.

Watkinson, D. and Neal, V. 1998 First Aid for Finds *(3rd edition), RESCUE and the Archaeology Section of the United Kingdom Institute for Conservation.*

Environmental Strategy By Diane Alldrit

The on-site environmental sampling strategy will systematically seek to recover a representative sample of botanical, molluscan (both terrestrial and aquatic), avian and mammalian evidence from the full range of contexts encountered during the excavation. This will enable, at the assessment stage, the possibility for radiocarbon dating material to be obtained, and for an initial analysis of the economic and environmental potential of the site. In order to achieve this, a bulk sample (BS, Dobney *et al* 1992) comprising an optimum size of 28litre of sediment (where possible) should be taken from **every stratigraphically secure and archaeologically significant context**. In practice it may not always be possible to obtain 28l of sediment from certain features during the assessment stage, for instance from partially excavated pits or post-holes, in which case a single bucket sample, c.10 to 14litre should be taken at the site supervisors discretion. Deposits of mixed origin, for instance topsoil, wall fills and obvious areas of modern contamination, should be avoided where possible, as these will contain intrusive material and not provide secure radiocarbon dates.

All buckets and other sampling equipment must be clean and free of adherent soil in order to prevent cross-contamination between samples. If dry soil is to be stored for any length of time it should be kept in cool, dry conditions, and away from strong light sources. However, it is preferable to process samples as soon as possible after excavation.

Bulk soil samples shall be processed using an Ankara-type water flotation machine (French 1971) for the recovery of carbonised plant remains and charcoal. The flotation tank should contain a >1mm mesh for collection of the retent or 'residue' portion of the sample (which may contain pottery, lithics and animal / bird bone, in addition to the heavier fragments of charcoal which do not float). The 'flot' portion of the sample, which may include carbonised seeds, cereal grain, charcoal and sometimes mollusc shell, should be captured using a nest of >1mm and >300micron Endicot sieves. Flotation equipment, including sieves, meshes, brushes and so forth must be meticulously cleaned between samples in order to prevent contamination of potential radiocarbon dating material. All material resulting from flotation will be dried prior to microscopic examination. Flotation is not suitable for the recovery of pollen or for processing waterlogged samples, which shall be discussed below.

Where there is potential for waterlogged preservation, shown for instance by the presence of wood and other organic or wet material, then a 5 to 10litre size sample should be taken (GBA sample, Dobney *et al* 1992). This material is to be retained for later processing using laboratory methods to enable the recovery of waterlogged plant material and insects. For assessment purposes a 1litre sub-sample of the organic sediment from each potential waterlogged sample shall be processed using laboratory wash-over methods, and once processed **kept wet**. All waterlogged samples awaiting processing should be kept damp, preferably stored in plastic sealable tubs, and in cool conditions. Where large waterlogged timbers are recovered these should be

stored under refrigerated conditions and an appropriate conservator consulted.

If sediment suitable for pollen analysis is encountered, for instance rich organic peaty deposits, or deep ditch sections with organic preservation, the archaeobotanical specialist is to be consulted prior to any sampling taking place. These deposits would require sampling with large kubiena tins and require the specialist to be on-site. Pollen analysis, even at assessment level, would subsequently impose a considerable cost implication should it be carried out.

The specialist is available to provide consultation and advice on the environmental sampling strategy throughout the course of the excavation and during post-excavation processing if required.

References

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French, D. H. 1971 An Experiment in Water Sieving. *Anatolian Studies 21* 59-64.